STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

GRETCHEN WHITMER
GOVERNOR

ORLENE HAWKS
DIRECTOR

DTE Electric Company, Petitioner,	MICHIGAN TAX TRIBUNAL
v	MOAHR Docket No. 16-003995
Bloomfield Township, Sigel Township, Respondents.	<u>Presiding Judge</u> Victoria L. Enyart

FINAL OPINION AND JUDGMENT

INTRODUCTION

In this consolidated docket, Petitioner, DTE Electric Company, appeals ad valorem property tax assessments levied by Respondents, Bloomfield Township and Sigel Township, against 40 parcels for the 2016 and 2017 tax years. Steven P. Schneider and Daniel L. Stanley, attorneys, represented Petitioner, and Richard A. Sundquist, Ingrid A. Jensen, and Gregory N. Longworth, attorneys, represented Respondents.

A nine-day hearing on this matter was held September 12-24, 2020. Petitioner's witnesses were Kevin Reilly, Hal B. Heaton, Terry Yee, and Steven Transeth. Respondents' witnesses were Michael J. McGarry, Dennis Buda, and Joseph Kettell.

Based on the evidence, testimony, and case file, the Tribunal finds that the true cash value (TCV), state equalized value (SEV), and taxable value (TV) of the 40 subject properties for the 2016 and 2017 tax years are as set forth on Attachment 2 and Attachment 3 to this Final Opinion and Judgment.

Sigel Wind Park (Sigel) is in Huron County and consists of 40 parcels, each containing one wind turbine. 16 parcels are in Bloomfield Township, with 24 parcels in Sigel Township. Each wind turbine has a capacity of 1.6 Megawatts (MW)[1] for a total of 64 MW. The industrial personal property appeal is as of December 31, 2015, and December 31, 2016.

This Tribunal finds that providing a brief history of Public Act (PA) 295 of 2008, as amended, is necessary to assist the reader before presenting the parties' contentions and testimony. The Clean and Renewable Energy and Energy Waste Reduction Act was created in part "to require certain providers of electric energy service to establish and recover costs for renewable energy programs. . . ." [2] The purpose of this act is "to promote the development and use of clean and renewable energy resources and the reduction of energy waste . . . ."[3] Electric providers whose rates are regulated by the commission were required to establish a revenue recovery mechanism and "the commission shall review each electric provider's plan pursuant to a filing schedule . . . [and] shall conduct a contested case hearing on the plan,"[4] to approve or reject plans or the proposed amendments to a plan.

The Michigan Public Service Commission (MPSC) is the regulatory agency that determines if a plan, or rate, or projected costs are "reasonable and prudent" if the plan is "consistent with the purpose and goals" in section one and "meets the renewable energy credit standard through 2021."[5]

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[1] One thousand kW equals one MW.
[2] 2008 PA 295, enacting § 1.
[3] MCL 460.1001(2).
[4] MCL 460.1011(3).
[5] MCL 460.1022(5)(a) and (b).

Governor Snyder signed PA 342 into law amending PA 295, increasing the renewable portfolio standard from 10% in 2015 to 12.5% in 2019 and 2020, with a final requirement of 15% in 2021. The amended act became effective as of April 20, 2017.

PETITIONER'S CONTENTIONS

Petitioner contends that the subject property is assessed more than 50% of its TCV based on its appraiser's income and cost approaches. Petitioner states that there are many wind park cases pending before the Tribunal, and this is the first one that will have gone to trial. This Tribunal has some familiarity with power plants and wind turbines are essentially mini power plants. They are essentially turbines sitting on top of a pole. The wind pushes the turbine blades, and they spin, producing fungible electricity, just the same as produced by fossil fuels.[6] The electricity goes from the turbine to a transmission grid consisting of high voltage wires connecting power plants to local substations. The substations reduce the voltage, which makes it safer for the local distribution system.

Midcontinent Independent Systems Operator (MISO) dispatches power when it makes economic sense, regardless of who owns the power plants. The power goes into a transmission system owned by the International Transmission Company and not the distribution utilities.

Sigel is the first wind park built by DTE. The GE 1.6 MW turbines are on the small side. Their in-service date was December 2012. Witnesses acknowledge

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[6] This is a case of first impression, the Tribunal has extracted from Petitioner's opening statement some details that may assist the reader throughout the opinion. In addition, a glossary terms & acronyms is included as Attachment 1.

substantial technology improvements and cost decreases partially due to federal

government tax incentives and state law mandates.

PA 295 requires the major utilities to obtain a certain percentage of their

electrical load from renewable sources, wind, solar, and water, all regulated by MPSC.

They regulate utilities which must demonstrate that it is reasonable and prudent to build,

for example, a wind farm. Contracts for Power Purchase Agreements (PPA) must be

reasonable and prudent for the costs to be recovered from the customers. As of

December 31, 2016, the law changed; a competitive bid is necessary for PPA and

construction contracts. Both market conditions and technology changed between the

time of Sigel's 2012 construction and December 31, 2016.

The Department of Energy provides data from three offices and publications.

They include the National Renewable Energy Laboratory (NREL), Department of

Energy Wind Technologies, and Energy Information Agency (EIA). The three agencies

do not provide consistent information. MPSC requires reports from the regulated utilities

to ensure that future electricity needs are met. Utilities are required to file factual

information and data, including long-range plans. If PPA's are not just and reasonable,

utilities cannot recover their costs. Both parties utilized MPSC, Department of Energy,

EIA, and NREL data in the appraisals.

Terry Yee, the DTE property tax manager, initially set up a system to track the

property by a turbine, location, and school district. Mr. Yee showed how DTE wind

property appropriately utilized the State Tax Commission (STC) wind turbine tables.[7] He

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[7] Petitioner's Exhibit 18.

presented DTE's TV calculations as Petitioner's valuation witness, Mr. Reilly's value is

above the Consumer Price Index multipliers for Proposal A calculations.[8]

Professor Heaton testified to various errors in Respondents' discount rate and its

application in Mr. Kettell's projected cash flows. Mr. Transeth, Petitioner's rate expert,

testified regarding regulatory information.

Both appraisals utilize dollars per kilowatt (kW). Mr. Reilly's first-year value is

$1,203 per kilowatt hour (kWh), and Mr. Kettell's is $1,900 per kWh. Petitioner states,

"One of the differences is Mr. Reilly projects market income as of the tax dates from a

market-based power purchase agreement."[9] He will show that regardless of who

purchases Sigel, a regulated utility or a non-regulated utility, the TCV is the same. The

market price for wind power converts into a revenue stream and income stream through

a discount rate, which considers the risk and recovering the projected income from the

asset, the wind farm.

Petitioner opines that Mr. Kettell does not mention the Apple Blossom PPA,

which was a couple of weeks before the initial tax date. He utilizes instead what he

believes DTE earns as of tax date based on Michigan regulations and Sigel's actual

construction cost, and historic 2012 MPSC permitted rate of return. Petitioner contends

that Respondents' appraisal by Mr. Kettell is looking backward by not considering the

information available just before tax day.

There are no sales of wind parks to extract capitalization rates and discount rates

in the income approach. Both appraisers utilized information from the stock market.

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[8] Petitioner's Exhibit 26.
[9] Tr. 1 at 26.

However, Mr. Kettell uses data that does not reflect the risk of owning stock in a publicly

traded company versus the risk of a single wind park that produces one product, is

located in one place, and uses one set of wind turbines with no diversification.[10]

Professor Heaton's testimony will show the math for size premium, reasonable

equity returns, and the resulting discount rate. The stock market data is considered

liquid, sold easily and quickly. Just a click on a stock price, and within minutes the

million-dollar stock is sold compared to the illiquidity of a million-dollar house that may

sit on the market for a long time. Wind parks are dependent on government support,

cash grants, and investment tax credits. The construction of a wind park is at a high

cost subsidized through government support. One wind park is small in relation to the

stock market data. Mr. Reilly considered an appropriate equity and dividend rate.

Petitioner contends that Mr. Kettell considered the correct information but then

averaged it with other data making it less reliable or apparent to the reader.[11]

The subject property "is a small division of a large publicly-traded company

whose operations, particularly methods of recovering some costs and generating

returns, are largely regulated and assured."[12] The value of Sigel is sought as of the two

tax dates at issue.

Both parties presented a discounted cash flow (DCF), cost approach and

considered the sales comparison approach. However, both parties utilized the data

differently. Petitioner presented current information based on December 31, 2015, and

December 31, 2016. Petitioner contends that Respondents' appraisal uses costs based

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[10] Tr. 9 at 1,637.
[11] Petitioner's Exhibit 107.
[12] Tr. 9 at 1,640.

on 2011 to 2012. The DCF is unique as it uses after-tax DCF and recognizes incentives

and accelerated Modified Accelerated Cost Recovery System (MACRS) depreciation.

Both appraisers will explain the complex weighted average cost of capital (WACC).

Mr. Reilly considered both PPA and Levelized Cost of Energy (LCOE).[13] He

prepared sensitivity analyses for the cost approaches. Petitioner had Mr. Reilly do a

DCF reality check. This sensitivity analyses did not use LCOE, the cost of building a

wind park, or the cost of entering into a PPA; but, it looked at market prices observable

as of the relevant tax dates. This method creates a lower value because those values

do not reflect the capacity and capital costs of a wind park. They are as practical as they

are helpful. because it tells us what Sigel would be worth without PA 295

requirements.[14]

Petitioner contends that the value of the subject properties decreased as of the

tax dates at issue due to the lower cost of replacement which includes higher capacity

turbines that cost less and are more efficient indicating obsolescence in the subject.[15]

PETITIONER'S ADMITTED EXHIBITS

P-1:   Appraisal Report Prepared by Kevin Reilly, evcValuation (Portions Confidential)
P-2:   Sigel Turbine Location and Road Map
P-3:   Map, Michigan Wind Parks
P-4:   Levelized Cost of New Generation Resources from DOE/EIA Annual Energy
        Outlooks (2012-2018)
P-5:   DTE Pine River Wind Park, MPSC Order in case U-18111 approving
        construction
        contract, dated December 20, 2016
P-6:   Consumers Energy Cross Winds, MPSC Order in Case U-15805, approving
        wind

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[13] A PPA is an arrangement for payment of wind power to assist in determining the market rate for electricity coming from a wind park.
[14] Tr. 9 at 1,622.
[15] Petitioner's contention for Bloomfield Township parcel 3 32-02-900-113-00 should be $1,391,500 not $1,308,700.

turbine purchase agreement, dated December 20, 2016

P-7   Michigan Wind Park Declining Utility PPA Rates and Costs

P-8:   Department of Energy 2017 Wind Technologies Market Report, Historic
         Installation Trends

P-9:   Materials on Apple Blossom Power Purchase Agreement (Redacted)

P-10:   Michigan Historical and Projected Round the Clock Energy Prices (from
         SNL Global)

P-11:   Sigel Historical generation by Month compared to Monthly Michigan Round the
         Clock Energy Prices

P-12:   Reilly O&M, Capital Expenditures, Projection Details (Confidential)

P-13   Reilly Work File, Discount Rate Support

P-14:   Appraising Machinery & Equipment, 3rd Ed., American Society of Appraisers
         (ASA), Income Approach Section

P-16:   Reilly Replacement Cost Workfile excerpts and other materials

P-16A: EIA July 2017

P-17A: Appraisal Economics/Kettell "The Appraisal of Renewable Energy Facilities,"
         May 17, 2012

P-17B: Appraisal Economics/Kettell "The Appraisal of Renewable Energy Facilities,"
         current website version

P-18   Sample Sigel STC personal property statement values compared to
         resulting assessments

P-22:   Details for Reilly Sensitivity Discounted Cash Flow (non-PPA, market dispatch)

P-23:   Reilly Cost Approach, Sensitivity Analyses

P-24:   Gear Box Failure Illustration (Confidential)

P-25:   Petitioner's Proposed Allocation to Parcels

P-26:   Petitioner's 2017 Taxable Value Calculations

P-27:   Excerpts from Kettell/MJM Consulting Consumers Energy Lake Winds Appraisal

P-100: Respondents' Prehearing Statement

P-101: Analysis of Respondents' Additions Calculations

P-102: Consumers Energy WACC Summaries

P-104: Hal B. Heaton Resume

P-105: Damodaran on Valuation

P-107: Revised and Corrected AE DCF Options

P-108: Huron Daily Tribune Article: DTE Investigating Dangling Blade in Sigel Township

P-110: Standard and Poor's Excerpts

P-111: Revenue Requirement

PETITIONER'S WITNESSES

Kevin Scott Reilly, Appraiser

        Petitioner presented testimony from its appraiser, Kevin Reilly. Mr. Reilly is the

owner and managing partner of evcValuation (EVC). He has been doing appraisal work

since 2002 and has been a general real estate appraiser since 2012. Mr. Reilly started

his career as an entry-level appraiser in the energy valuation group at American

Appraisal. While at American Appraisal, he trained with Mike Remsha, who is very well-

known in the utility and energy valuation industry, and he has assisted him on various

valuation matters. In 2006, Mr. Reilly joined Duff & Phelps' property tax consulting

group, where he continued appraisal work on energy-related properties. He was

recruited back to American Appraisal in 2009 and co-managed the practice with Mr.

Remsha until early 2012 when he retired. From 2012 to 2015, Mr. Reilly ran the energy

valuation practice at American Appraisal. He left American Appraisal in 2015 to form

EVC. In his 17-year career, Mr. Reilly's primary focus has been on energy and many

other types of properties, including cement plants, oil refineries, chemical plants,

telecommunications, railroads, and other manufacturing facilities. He has appraised at

least 20 coal plants on the energy front, including JH Campbell, St. Clair Belle River,

B.C. Cobb, 40-60 gas plants, including New Covert Generating, and 12 wind farms - 6

of which were in Michigan. Mr. Reilly has had several significant projects for local taxing

authorities and consulted with the Michigan Department of Treasury on a gas plant in

Zeeland.

Mr. Reilly has a BS in mechanical engineering from Marquette University. He is a

senior member of the ASA, a powerful presence in machinery and technical specialties

(MTS). Mr. Reilly was elected to serve a two-year term on the ASA's MTS committee

which is organized and tasked with helping promulgate future education within the

industry. He worked on the Valuing Machinery and Equipment textbook, published by

the MTS committee, and helped rewrite one of the chapters for the Fourth Edition. Mr.

Reilly has served on the International Conference of Valuation of Plant Machinery and

Equipment for six to seven years. Also, he participates in the Wichita State University

conference that is held annually in Wichita. He has taught or lectured on property

valuation ten to fifteen times in his career and has conducted numerous presentations

and webinars. He has authored and co-authored various published articles relating to

the valuation of energy property, including articles published in the MTS Journal. Mr.

Reilly has testified as an expert witness approximately 20-25 times and has never failed

to be accepted as an expert appraiser witness.

Based on his experience and training, the Tribunal accepted Mr. Reilly as

an expert appraiser witness, especially qualified to value power generation, including

wind parks. Mr. Reilly is familiar with energy and technology; he belongs to the

American Society of Appraisers, focusing on Machinery & Equipment. He was part of

the working group for revising the Valuing Machinery and Equipment Textbook,

considered by machinery and technical specialty appraisers as their "bible."[16] Mr. Reilly

prepared and communicated an appraisal of the subject property. It sets forth both an

income and a cost approach. The sales comparison approach was not developed for

this report.

Mr. Reilly inspected the subject property in June 2018. He consulted with eight to

twelve employees, conducted some on-site interviews, and follow-up communication to

prepare his appraisal. He considered information from SNL Financial (SNL Energy), the

US Department of Energy (DOE), and the NREL. MPSC was also utilized to analyze the

levelized cost of electricity and historical and current PPA rates. SNL Energy highlights

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[16] The Tribunal takes judicial notice that the Valuing Machinery and Equipment Textbook is akin to the
Appraisal Institutes textbook, *The Appraisal of Real Estate*.

important events in the energy industry. He testified that S&P Global owns SNL

Energy.

Mr. Reilly explained the significant components of a horizontal axis wind turbine.

However, without the exhibit, it is not easy for a reader to visualize. The blades capture

the wind, which turns the shaft. The pitch system controls and maximizes the energy

and blades. The blades are not fixed and rotate in pitch with the whole tower, which is

considered part of the yaw drive. The braking system is akin to a parking brake on an

automobile. It can be utilized if the turbine needs to be taken out of service. The yaw

drive and motor require the tower or turbine to face the direction of the wind. The

nacelle is the big box that contains the "guts" of everything. It includes the shafts,

gearbox, and generator. Mr. Reilly testified that:

> But as the blades spin, there's a-- what they call the low-speed shaft. That's turning. And the idea is that to get to the generator, the low speed shaft goes through a series of gears to increase the speed of the high-speed shaft, which feeds the generator and ultimately is producing the power. That power is fed down the tower, stepped up into the collection system. And then on the back end you'll see what's identified as the controller, the wind vane, that's basically the brains of the operation that's controlling, you know, the turbine electronically.[17]

The Anemometer is part of the control system measuring wind speeds, wind direction

with the wind vane. It helps to optimize the diagnostics of the performance of each

turbine.[18]

"Industry Analysis" described in Mr. Reilly's appraisal outlines the transition into

the open and deregulated market, which began in 1978. Congress passed the Public

Utility Regulatory Policy Act (PURPA). It allowed non-utility generators the ability to

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[17] Tr. 1 at 102.
[18] *Id.*

move power through regulated utility power lines. It required utilities to transmit power

based on the lowest cost. The Federal Energy Regulatory Commission (FERC) issued

Orders 888 and 889 and led to the creation of Regional Transmission Organization

(RTO) and Independent System Operators (ISO), as well as MISO.

MISO functions to dispatch orders for electricity to the lowest-cost facility first.

They make sure that the market is reliable, without brownouts and blackouts. It does not

matter whether a utility or non-utility owns the generating plant. Wind parks in Michigan

can bid the electricity into MISO as zero, as they do not require fuel. The wind parks are

considered zero-cost plants.

The price of electricity varies by time of day and season. Peak energy use is

dependent upon the temperature. The wind is at its lower level during the hot days in

the summer. Based on a document illustrating levels from 2013 through 2016, solar

power would be at the highest capacity in the summer when the sun is intense. When

round-the-clock energy prices are at its highest, Sigel is generally producing the lowest

power.

Mr. Reilly prepared a document indicating that from 2015 forward, long-term

projections of energy prices have declined. Due to low natural gas prices and reserves,

natural gas is being exported out of the country.[19]

Utilizing data from MPSC, a graph with 27 wind farms in Michigan, from 2009 to

2017, indicates the cost per MW has decreased after September 2012. The graph

includes both regulated and non-regulated utilities with either LCOE or PPA. The cost

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[19] Petitioner's Exhibit 10.

levels out to a range of $43 to $59 per MW hour (MWh).[20] Mr. Reilly explained that

LCOE is calculated by what is a required energy price on a dollar per MWh over a given

period for a return on and of the investment. LCOE typically sets the upper limit as

compared to a PPA. When developing a plant, companies can calculate their LCOE,

forming the upper market limit. The regulated utilities are developing LCOE to go

through the regulatory process. The non-utility companies generally favor the PPA. He

opined that the purpose of MPSC is to protect the ratepayers. "You know, my opinion

you're not going to get MPSC approval when you enter into a PPA at a lower rate than

whatever arbitrary number you're suggesting that the utility would want to make up."[21]

The capital costs to construct wind parks are substantially high after construction.

However, the wind is "free;" the turbines operate at the lowest capacity when the

demand (cost) is high. The federal government has incentives and credits to assist in

the construction costs of renewable energy. Tax credits for wind parks include the

Business Energy Investment Tax Credit (ITC) and the production tax credit (PTC), also

a federal tax incentive based on the cost to construct.

DTE selected PTC because the location is good for wind; however, a new owner

would only receive the remaining seven or six years of the ten-year credit. New

construction has the choice of PTC or ITC compared with a purchaser of an existing

wind park, which only has the remaining years for the PTC.

Under PA 295, Michigan required utilities to acquire Renewable Energy Credits

(REC) as of December 31, 2015. DTE, as well as CMS, met the statutory requirements.

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[20] Petitioner's Exhibit 7.
[21] Tr. 1 at 131-132.

PA 341 and PA 342 increased the percentage of renewable energy to 12.5% by 2019

and 15% by 2020. Mr. Reilly interviewed both DTE and CMS and neither anticipated

difficulties with meeting the new mandate. Mr. Reilly opines, "Future wind development

will increasingly depend on non-subsidized capital costs and the ability to obtain

favorable PPAs in determining overall project economic viability."[22]

The highest and best use was determined to be its current use as a wind farm.

Regarding financial feasibility, Mr. Reilly stated that:

> To be financially feasible, the subject must generate sufficient revenues to
> result in a positive cash flow. To determine the financial feasibility of the
> subject as of each appraisal date, the current and future economic
> prospects of PPAs for existing wind farms within the MISO energy market
> in which the subject operates were analyzed and reviewed as of each
> appraisal date. Utilizing market-based PPA revenues and operating
> expense projections, free cash flows were developed for the subject
> property into the future in the form of a discounted cash flow (DCF) model.
> A positive cash flow stream indicates that operation of the subject is
> feasible, whereas a negative cash flow stream does not justify continued
> operation of the subject. The DCF models resulted in net positive cash
> flows and a positive indicator of value from the income approach as of both
> appraisal dates. It was concluded that as of both appraisal dates, the
> financially feasible use of the subject plant is operation as a wind farm.[23]

Mr. Reilly was questioned, "And what is your understanding of how such MPSC

regulation affects the income that DTE earns from the use of its property?" He replied:

> Well, it's based on a rate regulatory model. They take costs of developing
> projects at the time that the purchase is made. They put that into a rate base,
> and they depreciate it over time. They're able to earn return – basically pass
> through their expenses and make a – earn a fair return on and of that rate
> base.[24]

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[22] Petitioner's Exhibit 1 at 30.
[23] *Id.* at 31 -32.
[24] Tr. 1 at 140-141.

Sales Comparison Approach

Mr. Reilly considered the sales comparison approach; however, due to the many

undisclosed details of the transactions, public information regarding if the developer

transacted and analyzed and elected PTC, did not provide a meaningful indicator of

value. Several sales are for rights to undeveloped wind farms or partial interests. The

buyer's motivations may be to maximize the purchase price for increased federal

income tax depreciation benefits, with adjustments made to arrive at the market value

for the tangible personal property not possible. The sales comparison approach was

considered utilizing six transactions, including Apple Blossom and Pheasant Run II from

Michigan, from December 2012 to July 2016. The sales comparison approach was

considered but could not be developed as an indicator of value without further public

details.

Income Approach

Mr. Reilly explained that he did not determine the value of Sigel based on Sigel's

rate base but market value, taking into consideration all the factors of the market as of

each appraisal date. The income approach is used by companies when they are

purchasing a property or an appraisal is commissioned to simulate a purchase. "Income

approaches are used after the purchase for financial reporting purposes. And it's used

by pretty much everyone in the industry to determine value. It's the only approach used,

for the most part."[25]

Mr. Reilly explained the DCF method as follows: The DCF utilizes both

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[25] Tr. 1 at 142.

"direct capitalization and yield capitalization, also referred to as discounted cash flow ("DCF") analysis The direct capitalization method "capitalizes a projected net income or cash flow of (expected from future benefits) into perpetuity. It assumes. . . No variation in the capitalization rates and no termination of the income stream. . .."[26]

Further, "the DCF method is a form of analysis in which the quantity, variability, timing, and duration of the periodic income and residual value are projected, and the periodic income and residual value then discounted to present value using a discount rate,"[27] which is the process for testing the financial feasibility for development of a project. Mr. Reilly utilized a discount cash flow model with a ten-year term. The tenth year a direct capitalization is applied to value the future income into perpetuity. The direct capitalization is utilizing a single normalized income.

> You seen it done a lot in real estate properties, where you have a very consistent or more consistent levels of cash flow. On the power generation and the power generation industry it's the opposite. You see mostly discounted cash flow modeling done. And that has to do with just being able to project future cash flows that they are expecting into the future, in a more real-world way.[28]

Business Enterprise Value (BEV) includes all assets that contribute to value. It includes property, plant, equipment, intangible assets, and working capital. he following LCOE and PPA rates were considered when determining market rates.

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[26] Petitioner-1 at 37, Citing American Society of Appraisers, *Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets*, 3rd addition (2011), 137.
[27] Id.
[28] Tr. 1 at 143.

Facility	MW Capacity	Year Built	LCOE-PPA	MWh
Sigel	64	2012	LCOE	$61
Pheasant Run I	74.8	2013	PPA	$49.25
Pheasant Run II	74.8	2013	LCOE	$49.25
Cross Winds I	111	2013	LCOE	$59
Big Turtle	49.4	2013	PPA	$53
Pinnebog	50	2014	LCOE	$47
Apple Blossom	100	2015	PPA	$43

Sigel's LCOE was set at $61 MWh in 2012, after which LCOE and PPA prices declined. Mr. Reilly opined that Sigel could not receive more than $43 for a PPA as of December 31, 2015. Mr. Reilly was also working on Lake Winds simultaneously as Sigel, where he had multiple conversations with Mr. Ronk. "Mr. Ronk oversees the pricing out and purchasing of renewable energy/power, and negotiated Apple Blossom's PPA for $43 per MWh. He knows the cost of LCOE for a project and what is prudent and reasonable for approval by MPSC. The market has changed. The buyer's (market) is no longer concerned about meeting the renewable energy requirement. The market declined after the renewable energy requirements were met due to less demand.

Mr. Reilly explained that the Annual Energy Outlook published by the federal government in 2012 also forecasted the levelized cost of electricity for wind would decline. [29] The data is consistent. The price per MWh for wind projects has been declining since 2012. The total wind system levelized cost was $96 compared to conventional combined cycle gas plants of $66.1, which is about a 30% difference. The renewable incentives were necessary to assist new renewable energy construction.

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[29] Petitioner's Exhibit 4.

However, both DTE and Consumer's Energy met their REC and the demand decreased.

The Power Supply Cost Recovery Plan, as reconciled by Consumer's Energy,

confirmed the cost of Consumer's Energy's November 19, 2015 PPA for Apple Blossom

at $43.

Mr. Reilly explains the DCF application as the future operations and cash flows of

the subject's projected revenues based on market-based PPA rates for existing wind

farms as of the appraisal date, operating expenses, CAPEX, and changes in working

capital levels over ten years. The cash flow was discounted to the appraisal date using

a market-based WAAC to reflect the risks of owning the subject property. The analysis

for the DCF includes all tangible real and personal property; a cost approach was

required and reconciled with the income approach to develop the TCV for just the

tangible personal property assets.

Mr. Reilly selected Apple Blossom Wind Park at $43 per MWh as it was the most

recent PPA. The Act 295 Renewable Energy Report reported that the PPA was less

than $45 per MWh. The Consumer's Reconciliation of its Power Supply Cost Recovery

Plan established a price of $43 MWh. The projected annual revenue formula is:

PPA Price X Net Generation
$43.00/MWh x 239,357 MWh=
$10,292,351.[30]

The 2013 through 2016 financials were also considered. However, DTE's

accounting for corporate overhead for Sigel was grouped with the Minden and McKinley

Wind Farms, located in the thumb. The overhead for the three Wind Farms was

allocated on the total thumb capacity of 110.4 MWh. The overhead and operating

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[30] Petitioner's Exhibit 1 at 43. (This was used for each of the 10 years of the DCF.)

expenses are based on the net operating capacity of the three wind farms and then

distributed on a pro-rata basis. Corporate overhead does not record income streams for

individual plants. Mr. Reilly found the historical operating expenses reasonable, as well

as the operating contract in place with Duke Energy. The operating agreement would

also be reflective of what another owner would also pay. The two-year average was the

basis, with a 2% long-term growth. The annual capacity factor and annual net

generation (i.e. MWh), space operations, maintenance with some corporate overhead in

2015 and 2016 are CAPEX. DTE contracted with Duke Energy to operate the Sigel

facility. Mr. Reilly found this reasonable for the operation and maintenance budget.

DTE's prorated overhead was allocated based upon net capacity and increased 2% per

year.

Tax depreciation and amortization expenses are non-cash expenses used to

calculate income taxes (not an actual cash outflow for the subject). MACRS tables are

the basis for income tax depreciation.[31] The machinery and equipment basis to be

depreciated took the tangible asset value and deducting the building and land

improvement's value.

For nonresidential general land improvements in buildings, IRS Publication 946

lists a 39-year straight-line depreciation schedule for income tax depreciation. The

building and land improvement's TCV basis depreciated at 1% of the tangible TCV. The

15-year straight-line schedule was applied to the intangible operating asset, estimated

at 5% of the BEV. The result is the corporate overhead.

Operating Expenses (Year One of DCF):

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[31] "Wind generation assets can be depreciated using a 5-year MACRS." IRS Publication 946.

Operations and Maintenance	$ 2,177,064
Plus Corporate Overhead	$ 297,024
Plus Depreciation and Amortization	$15,086,981
Total Operating Expenses	$17,561,069

Earnings before taxes and interest (EBIT) equals total revenues less total operating expenses. For year one the revenues were $10,292,351 and total operating expenses of $17,561,069, for operating income (EBIT) of ($7,268,718).

Corporate income taxes for Michigan are deductible expenses when computing federal corporate income taxes. The composite income tax rate is 38.90%. In year one of the DCF analysis, the operating income is negative; income taxes are not calculated or deducted. The operating income and net income are equal to negative $7,268,718.

When Sigel went online in 2012, the owner chose PTC. In the event of a sale, the new owner could take advantage of the remaining seven eligible years of the PTC. Therefore, the value of the PTCs were considered a dollar-for-dollar cash equivalent and added into the cash flows after taxes. The 2012 PTCs were set at $0.015 per kWh and increased based on the IRS inflation. As of December 31, 2015, the PTC price was 0.23 per kWh or $23 per MWh. The total PTC that Sigel receives in year one is $5,505,211.

Under CAPEX, the first line is titled CAPEX and the second line is titled "Gearbox Replacement." Mr. Reilly's understanding of the 2013 failed gearbox and blade bearings was explained to him by Dr. Buda. The Tribunal notes that Mr. Reilly testitifed in great detail of his understanding of the gearbox issue after the Tribunal overruled Respondent's objection that it was hearsay. DTE's historical CAPEX budget accounted for gearbox failure, but not for the actual amount. Mr. Reilly took the gearbox failures into account by concluding that one gearbox replacement per year would be

reasonable. The $400,000 cost increased by 2% per year for inflation going forward. Mr.

Reilly stated that he has heard of approximately four to six gearboxes a year that have

been replaced. In year one, the projected total CAPEX for Sigel was determined to be

$934,224.

Mr. Reilly's explanation of the tax depreciation for the subject property is as

follows:

> So, in an appraisal you're assuming a transaction and based on the transaction- it's an asset transaction see step up the depreciation, so you're basically starting a depreciation schedule over. What shown at the bottom is the depreciation waterfall. It's a typical waterfall calculation for depreciation based on different components.

> The components start on line 7 under "Amortization". This is based on the intangible value that we have. There's a small amount. Intangibles are depreciated on a 15-year straight-line, and the calculations are shown years one through ten. Line 11 is the building, based on a 39-year straight line. 13 is the machinery and equipment. That's the five-year MACRS schedule and depreciation calculation we just talked about. And then what's shown down below is just the sum of all of those for each of the -- each of the years.[32]

Depreciation on line 13 is the five-year MACRS schedule, the majority of the

depreciation represents depreciation for machinery and equipment. Income taxes are

35% federal and 6% state, with the composite 38.9%, based on the composite tax rate.

Working capital (WC) is the line item for variances in WC. Mr. Reilly explained

that when WC changes it results in an increase or decrease in the cash flow of an

operating plant dependent upon whether the revenues are increasing or decreasing.

The changes are calculated by comparing the revenue level in a given year to the

revenue level in the previous year and multiplying the difference by the required WC

level as a percentage of revenues. The WC changes were 5% of revenue growth.

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[32] Tr. 1 at 177.

Free cash flow is the *after-tax cash flow* available to potential owners or debt and equity investors. The formula is the net income plus depreciation amortization plus PTC less CAPEX less working capital changes. Year one is $12,389,250.

Net Income	($7,268,718)
Add Back Depreciation and Amortization	$15,086,981
Plus Production Tax Credits	$5,505,211
Less	
CAPEX	$934,224
Working Capital Changes	
Equals Free Cash Flow	$12,389,250

The future free cash flows need to be discounted to the appraisal date to account for the time value of money and the basic concept that a dollar received today is worth more than a dollar received at some point in time in the future. This considers the investors required return to bear the risk associated with the investment or the cost of capital to the business that is looking for an investor. Mr. Reilly discusses the type of investor for the subject property:

There are two types of investments an equity investment or debt investment.

> The equity investment represents purchasing a whole or partial interest in the property or business, and a debt investment represents loaning funds to a third party for the purchase of a property or business. The risk associated with the equity investment is greater than that associated with a debt investment, because in the event that a business fails the debt holders are entitled to compensation for their investment before any equity holders.[33]

The appropriate discount rate for the subject property was developed on an investment structure of a potential purchaser for the wind power generation facility. An investor's required return is produced using the WACC. "Discount rate and WACC can

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[33] Petitioner's Exhibit 1 at 47.

be considered synonymous terms. The WACC analysis included analyzing the typical

capital structure of companies in the wind power generation industry ('guideline

companies'), developing a cost of equity, and developing a cost of debt."[34]

Three guideline companies were considered in the capital structure portion of the

WACC analysis. These companies are involved in competing in the power generation

industry and a significant portion of their portfolio consists of wind generation capacity,

with a minimal amount of transmission or distribution assets.

Weighted average divides the average total, or average total equity of the

guideline companies by the total average invested capital dollar figure of the guideline

companies (debt plus equity).

Capital Structure of Guideline Companies		
Company	Debt (%)	Equity (%)
Exelon Corp.	48.70%	51.30%
NextEra energy Inc.	35.80%	64.20%
NRG Energy Inc	83.70%	52.40%
Weighted Average	47.60%	52.40%

The annual 2015 10–k filings for each respective company were considered for

the capital structures. It is not necessarily representing long-term capital structure as it

is just one year of operating income. Mr. Reilly presents a long-term capital structure

analysis for the three companies with a 10-year average, 5-year average, 10-year

median, and 5-year median. The long-term capital structure conclusion is 45% debt and

55% equity.

The same three companies were utilized to determine the typical Beta, which is

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[34] Petitioner's Exhibit 1 at 47.

a measure of a specific company's stock price volatility or systematic risk compared to

the stock price volatility or systematic risk of the overall market composite index. A beta

of less than one reflects that specific company stock will be less volatile or less risky

than the overall market. In contrast, a beta of greater than one reflects that is particular

company's stock will be more volatile or riskier than the overall market.[35]

Correspondingly, a beta of exactly one reflects volatility or a level of risk equal to the

overall market.[36]

Guideline Company Betas[37]		
Company	Published Levered Beta	Relevered Beta
Exelon Corp.	0.70	0.63
NextEra Energy Inc.	0.75	0.81
NRG Energy Inc	1.00	NMF
Weighted Average	0.82	0.72

The three guideline companies were again analyzed to determine the typical

level of working capital representative of companies in wind power generation. It

represents the difference between cash and cash equivalent assets, also known as

current assets and short-term accounts payable, known as current liabilities, required to

operate efficiently. It is a component included in the BEV of a business. The working

capital levels as a percentage of annual revenues for the guideline companies are as

follows:

Guideline Company Working Capital	
Company	Working Capital (%)
Exelon Corp.	21.10
NextEra Energy Inc.	-18.90

[35] Petitioner's Exhibit 1 at 50.

[36] *Id.* Andrew J. Cueter, "Using Beta," *Value Line*
(2012),www.valueline.com/Tools/Educational_Articles/Stocks/Using_Beta.aspx#.V60qOttTGUk.

[37] NWF the relevered beta could not be calculated for each of the guideline companies because no
effective tax rate was available.

NRG Energy Inc	20.60
Weighted Average	9.60

The table only shows one operating year and does not represent the long-term working capital of companies. Mr. Reilly did a grid with a 10-year average, 5-year average, 10-year median, and 5-year median. He concluded to 5% capital for the long-term working capital.

The investor's return on equity used both a capital asset pricing model (CAPM) and the build-up method. They are both developed utilizing historical financial data of equity and debt markets. The CAPM uses the subject's required long-term equity return, risk-free rate, concluded beta of guideline companies, equity market risk premium, as well as any additional risk premium.

The 20-year U.S. Treasury security bonds yielded a 2.67% yield for the risk-free investment. The previous beta of .075 is reflective of the systematic risk for the wind power generation industry.

The equity risk premium is the benchmark return that investors require to acquire an equity stake in a company. The long-term government bond income 5% return is deducted from the 12% return of large companies' stocks the equity market risk premium is 7%.[38]

The subject property is a single generating facility or operating business that does not have the operational advantage of any of the guideline companies with a portfolio of power generating facilities. Mr. Reilly added a risk factor to the cost of equity to account for the additional risks associated with size, industry, financing,

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[38] Petitioner's Exhibit 1at 54. *Duff and Phelps 2016 Valuation Handbook‑Guide to Cost of Capital*.

diversification, liquidity, and operation of the subject property. The other risk factors considered the small company size premium company and asset-specific premium. The 2016 Valuation Yearbook published size premiums which are divided into deciles. Decile 1 are companies with the lowest size premiums. Decile 10 are companies with the smallest market capitalizations and the highest size premium. The greater the size of the premium, the greater the inherent risk in a company of that specific size. Mr. Reilly determined that the subject property would be in decile 9-10 with a 5.60% beta adjusted size premium.

The build-up method considers long-term cost of debt, market-based debt risk premium, additional risk premium to arrive at the cost of equity. The CAPM result is: 2.67% (risk free investment) + (0.75 (beta) X 7.00%) + 5.6% (size premium) equals 13.52% for cost of equity by the CAPM. The build-up method result is: 4.04% (Moody's Seasoned Aaa Corporate bond) + 5.70% (Large -Company stock returns 12% -6.3% (long-term corporate bonds return) + 5.60% (additional risk for size, liquidity, lack of diversity) equals 15.34% cost of equity to the build-up method. Mr. Reilly concluded to a reasonable cost of equity for the subject property at 14.40%.

The cost of debt analyzed yield-to-maturity debt securities for the three guideline companies (7.40%), as well as Moody's Seasoned AAA Corporate Bond (4.04%), Moody's Seasoned BAA Corporate Bond (5.5%). Only one of the guideline companies had a debt of 10 years. Moody's Seasoned BAA Corporate Bond (5.5%) is concluded to be the risk to an investor by Mr. Reilly.

The discount rate/WACC weighed the cost of equity multiplied by the cost of capital multiplied by tax-affected interest. The equity multiplied by the cost of capital

9.40% WACC. The percentage of the effective tax rate of 0.60% is added, resulting in

the after-tax discount rate of 10%. The 10% is utilized in the after-tax cash flow in the

income DCF analysis.

The income approach is discounted to the valuation dates at issue. The after-tax

discount rate develops the present value factors to discount year one through year 10 of

the projected free cash flows for the subject in the DCF analysis. The normalized level

of free cash flows with capitalized value direct capitalization rate is calculated by taking

the after-tax discount rate and subtracting the cash flow growth rate of 2% based on the

long-term inflation analysis. (10% overall rate -2% equals 8% at the end of year ten).

The BEV added together with the present values of the free cash flows for your one

through 10 ($63,418,313) plus the present value of the capitalized free cash flow into

perpetuity ($15,418,094) equals a BEV of $78,836,407.

BEV includes working capital, operating intangible assets, and intangible assets.

The TCV should only include the tangible assets of the subject property. Mr. Reilly, in

past valuations of power generation plants, found that "a wind farm typically include[s]

an assembled and trained management team and workforce, computer software,

drawings, and operating manuals and procedures."[39] The operating intangible assets

typically have a value of 5% of the BEV, resulting in $3,941,820. In addition, 5% of the

revenues are a typical level of working capital for a company with significant wind-

generating assets—the working capital position of approximately $514,618 based on

revenue forecast in year one of $10,292,351.

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[39] Petitioner's Exhibit 1 at 59.

The operating intangible assets ($3,941,820) and intangible working capital ($514,618) are deducted from the BEV of $78,836,407 for a rounded TCV for the subject's tangible assets of $74 million.

Mr. Reilly's ten-year Income Approach DCF Analysis is reflected the mathematical spreadsheet utilizing the information discussed above. In addition, a DCF sensitivity analysis was prepared.

The cost approach was developed as a reproduction cost new. This determines if the current cost to create an exact replica of the subject facility is feasible, using same or similar materials and construction methods. The replacement cost new (RCN) is also considered to equal the cost of the new modern facility with the same utility as the subject. The contemporary facility may be more efficient, smaller, and more advanced than the subject property, but it must provide the same utility. If the RCN is less than the reproduction cost new, the difference due to excess capital cost is one form of functional obsolescence.

Physical deterioration is a loss in value due to age, wear and tear, corrosion, fatigue, or any physical deficiency affecting the subject.[40] The physical life of the assets is referred to as service life. The effective age represents its age in comparison to a new similar and equivalent asset. Physical deterioration captures the loss in value as the asset's effective age approaches the expected physical life.

Functional obsolescence is loss due to inefficiencies when comparing the subject property to modern replacement facilities. It could result from inefficiencies compared to

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[40] American Society of Appraisers, *Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Asset,* 3rd ed. (2011), 42.

the modern replacement, excess operating expenses, design, and technical shortfalls.

Operation shortfalls were quantified by calculating the difference in operating costs

between the subject and the modern facility. The result is then "present valued" to

establish the deduction over the remaining useful life of the subject. Functional

obsolescence is done on an after-tax basis because if the excess operating costs did

not exist, the overall taxable income stream of the subject would be higher.[41]

Economic obsolescence accounts for a loss in value due to external factors such

as the industry's overall economy, the local economy, changes in market preferences,

loss of materials, loss of labor source, new legislation, and increased competition.[42]

Deductions for physical deterioration, functional obsolescence, and economic

obsolescence are applied in the cost approach process. The cost approach process is:

Reproduction Cost New
<u>Less Functional Obsolescence due to Excess Capital Costs</u>
Equals Replacement Cost New
Less
     Physical Deterioration (PD)
     Functional Obsolescence (FO) due to Excess Operating Expenses
     Economic Obsolescence (EO)
     Curable Deterioration and Curable Obsolescence
     <u>Curable FO/EO due to Necessary Capital Expenditures</u>
Equals Cost Approach Indicator of Value of Improvements
<u>Plus Land Value</u>
Equals Cost Approach Indicator of Value [43]

Mr. Reilly determined that as of December 31, 2015, the economic environment

in MISO was favorable to the construction of renewable energy. The Department of

Energy 2015 Wind Technologies Market Report and the NREL 2017 Annual Technology

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[41] Id, 74.
[42] Id, 78.
[43] Petitioner's Exhibit 1 at 66.

Baseline reports were referenced in the replacement facility capital cost. The result was

divided and equates to $1,937 per KWh. The $1,937 is multiplied by the 64 MW

capacity for the subject property equals the base RCN of $123,968,000. The effect of

ITC or PTCs were both considered due to their reduction of the cost of owning a wind

farm and encouraging development. The 30% ITC reduction applied towards an income

tax liability in qualified cost (approximately 95% of the cost). $123,968,000 x .95 =

$117,769,600. The remaining 5% is $6,198,400. The ITC is 30% x $117,769,600 which

results in the net RCN of $89,000,000.

Physical deterioration is based on comparing effective age to physical life (the

asset will continue to be operational until it physically deteriorates to an unusable state).

The physical life for each asset group is grounded on past experiences in valuing similar

assets. Physical deterioration was the perceived condition during the subject site visit

and discussions with on-site management, maintenance, and engineering personnel. he

total weighted physical deterioration is divided by the total reproduction cost new for the

facility to arrive at an overall physical deterioration for the subject property. The

percentage of physical deterioration is then multiplied by the total physical life to equate

to the remaining physical life for each asset group. The analysis resulted in an overall

physical deterioration of 11% and remaining physical life of 26 years.

The assets were divided into the following categories:

Asset Category Description	RCN	Average Life	Effective Age	%Effective Ratio	% Physical deterioration	Remaining Physical Life
Structures & Improvements	$4,516,638	50	3	6	6	47
Wind Turbines	$90,674,452	25	3	12	12	22
Accessory Electrical Equipment	$8,426,493	45	3	7	7	42
Station Equipment	$167,473	45	1	2	2	44

Miscellaneous Plant Equipment	$10,783,109	45	4	9	9	41
Construction Work in Progress		29				29
Total Reproduction Cost New	$114,568,165	29			11	26

Physical deterioration for the subject is 11% applied to the RCN: $89,000,000 x

11% = $9,700,000. $89,000,000 - $9,700,000 = $79,210,000 which is the RCN less

physical depreciation.

The subject is less efficient as compared to the modern replacement plant. Mr.

Reilly states, "New modern wind turbines generally will have higher tower heights,

greater rotor diameters, better diagnostics sensors, and overall increased operating

efficiencies than older vintage turbines from even five to 10 years ago. These

technological advances have resulted in increased capacities as well as capacity factors

for wind farms across the U.S."[44]

Functional and economic obsolescence for a wind farm is interrelated. The use of

an earnings shortfall and cash flow of a modern plant captures both types of

obsolescence in one calculation. The earnings shortfall captures the efficiency of the

improvements and quantifies any economic obsolescence. The combination of a cash

flow on a modern wind farm and the cost of constructing a current facility captures

obsolescence. The calculations are similar to the DCF, as the inputs are similar with

operating expenses (Line 14) which are higher than the DCF. The operating costs come

from market reports for a new modern plant. However, Sigel is an existing planet and is

different from the analysis, which only looks at the cash flows of a newly constructed

plant. The operating expenses are analyzed to determine the revenue generated and

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[44] Petitioner's Exhibit 1 at 71.

the value of the cash flows. The result is associated with what it costs to build the plant,

and the difference is obsolescence. Mr. Reilly notes that the capacity factor for Sigel

was used. He summarizes:

> If we were to build a new plant with the technology advances that we've discussed, we have market evidence that suggests that capacity factor would be higher than Sigel. If we used a higher capacity factor in this analysis you would get more cash flow and your obsolescence penalty would be less. And what you're doing by reducing that is you are eliminating the functional obsolescence in the analysis.
>
> So, by running the capacity factor at Sigel's capacity factor we're saying it misses out on that additional cash flow that the new modern plant would get and that missing out of cash flow is attributed to the functional penalty. The rest is all economic and based on the market conditions, which is driven by the PPA market pricing or whatever other revenue generates at the facility. So that's how we capture both functional and economic in this analysis.[45]

Mr. Reilly agreed that if he used a traditional income shortfall method, the

conclusion would essentially be similar. However, it would indicate more obsolescence.

Petitioner's Exhibit 23 shows if the replacement plant is at a higher capacity factor than

the subject and the economic and functional obsolescence are separated (including the

analysis in the appraisal), the capacity factor used is increased from 3% to 45.7% (vs.

42.7%).[46] The DCF was the same by changing the capacity factor, which eliminated

functional obsolescence due to higher, more efficient technology, resulting in a 23%

penalty.

Mr. Reilly testified that Sigel's revenue shortfall is achieving and penalized for is

the delta or difference in the capacity factor. Side-by-side comparison and the present

value of the penalty over the 26-year life (based on the physical deterioration analysis)

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[45] Tr. 2 at 255-256.
[46] Tr. 2 at 258, "The fast shift towards the silent wind powered revolution in USA and the related huge energy and economic benefits" Bernard Chabot.

resulted in $6.8 million, which results in the same value conclusion of $85 million. "So,

all we're doing is – because, Mr. Schneider, you had asked us is to run this to break it

out so it was clear that we are capturing both functional and economic in our analysis."[47]

A replacement facility has the advantage of utilizing a full investment tax credit

over Sigel. Mr. Reilly takes that into consideration, as well as the principle of

substitution. Building a plant is more economical as the option for the ITC sets the upper

maximum amount that a developer would pay versus buying a plant with seven years

remaining (for tax year 2015). Mr. Reilly testified that "…you may select the PTC

because it's a function of the production. So, if you have a lot of production, likely,

you're going to pick the PTC. If you're in a less desirable wind resource and that

production is less, you may get more benefit from the ITC."[48]

Mr. Reilly was questioned on cross-examination on the respected financial

literature he utilized to determine whether his 7% Equity Market Risk Premium (ERP)

was in line with finance experts. Duff & Phelps was consulted "We calculated our own

ERP."[49] Duff & Phelps (page 3-39) shows how to make the conversion when using a

20-year U.S. Treasury, which yielded a 6.33%. Mathematically that is correct; however,

Mr. Reilly testified:

> Well, we explain in our report how we calculate it, looking at the long-term
> company stock return dating back to 1926 along with the government bond
> of 5 percent. Those numbers are the Duff & Phelps book, the same book
> we referenced. There's multiple ways of calculating the ERP, in my opinion,
> and I believe the way we've done it is the best.[50]

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[47] Tr. 2 at 260.
[48] Tr. 2 at 265.
[49] Tr. 4 at 747.
[50] Tr. 4 at 749.

Mr. Reilly disagreed that the Duff & Phelps method results in a 6.33% versus the 7% (he calculated) and was the appropriate rate. There are numerous formulas within the 2016 book. Respondents then, utilizing the 2017 handbook from Duff & Phelps, show the conversion for the ERP for the spot 20-year yield a 6.21%. Respondents' Counsel asked Mr. Reilly if you were to reduce your equity risk premium from 7% to 6.2%, that would reduce your cost of equity calculation by more than half a percent, correct? The answer was Yes.[51]

Mr. Reilly was questioned of his awareness of Professor Damodaran's publications. He is familiar but usually did not refer to them. Professor Damodaran's equity risk premium for developed economies for 2015 was 5.94%, and 2016 was 5.72%. Mr. Reilly disagreed that the percentages were comparable to his own 7%. The following publication, *"Equity Risk Premiums: Determinants, Estimation, and Implications* – the 2017 Edition" is a survey by Pablo Fernandez that indicated that the average risk premium for the United States is 5.7% (table on page 3). The median for the market risk premium is 7%. *Pratt & Grabowski's Cost of Capital: Applications and Examples* is a publication that Mr. Reilly has reviewed. The 2010 and 2014 editions were both discussed. The 2010 Equity Risk Premium:

> Based on empirical research on the magnitude of the equity risk premium, we conclude that long-term equity risk premium is in the range of 4 to 6 rather than above the 7 percent that most analysts have used in recent years. We follow the – we follow the financial crisis from 2008 through the late 2009 and explain how the conditional equity risk premium increased during the depths of the crisis and have decreased subsequently.[52]

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[51] Tr. 4 at 751.
[52] Tr. 4 at 754-755; Pratt & Grabowski's Cost of Capital: Applications and Examples, 4th ed. 2010 at p 22 XXII.

After examining the various studies, we have concluded that a reasonable estimate of the average long-term unconditional ERP is in the range of 3.5 to 6% (corrected).[53]

Mr. Reilly's next question was if his equity risk premium reduced from 7 to 5.5 % and determined that beta was .75 times one and a half percent would reduce your CAPM by one and an eight percent. Mr. Reilly would not reduce it but agreed that the math was correct.

The next issue is the equity risk premium used with Petitioner's CAPM method and historical measure. The historical returns from 1926 to the appraisal date. The historical analyses were "to calculate the ERP as a portion of the discount rate. The discount rate is applied to capture the proper amount of risk that's in the cash flow and to present those future cash flows to a current value, or a present value."[54] Respondents questioned whether there is another approach other than historical. Mr. Reilly agreed that there are different approaches and disagrees that Dr. Damodaran's opinion that his implied approach is superior to a historical approach. He admits that there are alternative ways at equity risk premium, and it's a highly discussed topic. He can find multiple articles that support the calculation and methodology that were used. When asked, "Yours was a future-looking purpose valuation; correct?"

> My discounted cash flow is future-looking. I'm trying to equate a current equity risk premium as of the appraisal date, and in my opinion, it has an historical look. Going back in a long period of time captures a very diverse market, you know, World Wars, major events. It gives a good expectation of what investors can return from an equity – or, from the market, the stockmarket.
>
> It also looks at what the bond rates are, and that's the entire purpose of equity risk premium is trying to determine that premium above a risk-free

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[53] Tr. 4 at 756; Pratt & Grabowski's Cost of Capital: Applications and Examples, 5[h] ed. 2014 at p 140.
[54] Tr. 4 at 757 and 758.

bond rate that you can – equity holder's demand. And my opinion is that historical look is best[55].

Respondents' next issue is calculating the Equity Risk Premium (ERP) for the CAPM method.[56] The arithmetic mean was selected for stock returns which were 2% higher than the geometric mean.[57] The long-term government bonds at 6 and 5.6 were close, with large company stock returns at 12% for arithmetic and 10% for geometric. Mr. Reilly opined that much of all of the practitioners in valuation use arithmetic means to calculate. He has not seen the geometric mean used in any appraisal he has seen

Respondents questioned the formula for the CAPM model used to calculate the cost of equity. (Beta and Equity Market Risk Premiums were already discussed.) The final component is the additional risk premium. In this valuation, Mr. Reilly explained that "in this valuation we used a size premium, which accounts for a comparison of smaller company versus larger corporations. Or it it's a measure of –it's a measure of calculating the additional risk with owning a small company, small asset."[58] Petitioner's buildup method added one percent but did not in the sensitivity DCF. Respondents explained that with the PPA and the fact that it has a fixed price carried forward over the term of the DCF, there is less risk in revenue cash stream than there would be if subject to commodity pricing in MISO, the guaranteed price versus the fluctuating price cannot be predicted.

The power generator does not have to be a regulated utility. It could be an Independent Power Producer. The entire corporation, for example of Next Era, is larger

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[55] Tr. 4 at 761.
[56] Petitioner's Exhibit 13 at 25.
[57] *Id.*
[58] Tr. 4 at 766.

than Sigel. The size premium is because this appraisal is for a single-stand-alone asset.

Mr. Reilly's PPA pricing used in the analysis is based on market pricing, regardless of

who owns it. The size premium is critical as there is one stream of cash flow for one

asset - Sigel. Respondents suggest adding it into the portfolio of everything DTE,

Consumers, or Next Era owns in which the risk would be reduced with the use of a

smaller risk premium. "That's the whole point of a property tax valuation, when you look

at a single asset is to make sure you get the risk premium right, and that's what you are

doing."[59] It may be different if buying multiple plants at the same time. But in this

instance, it is one plant. The potential purchaser will look at the subject as a single set

of cash flow. The value for the subject property that is being appraised, is one plant.

Respondents questioned Petitioner about a 2016 Minnesota Supreme Court

Case,[60] where Mr. Reilly's appraisal was for the Minnesota Energy Resources Corp.

(MERC), owner of a natural gas plant. He again added an additional risk factor of 3% in

his CAPM method. The property was a natural gas distribution that spread across the

entire state. The Minnesota Supreme Court disagreed with Mr. Reilly's expert opinion

finding:

> Faced with conflicting testimony by competing experts, the tax court agreed
> with Eyre's position that '[p]roperty specific risk or nonsystemic risk should
> not be accounted for in the cost of equity, but rather should be accounted
> in the forecast of expected cash flows.' Eyre also testified about a study that
> showed that, 'there is no conclusive empirical evidence to support the
> general practice of adding a small firm risk premium to the discount rate
> when valuing small firms.'[61]

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[59] Tr. 4 at 769.
[60] *Minnesota Energy Resources Corp v Commissioner of Revenue*, 886 NW2d 786 (2016).
[61] *Minnesota Energy, supra*, at 794; Tr. 4 at 772-773.

The Minnesota Tax Court rejected the additional risk premium in the MERC case. The same risk premium was applied in both the CAPM method and his buildup method. Respondents suggested that because Mr. Reilly averaged the CAPM and Buildup methods, the cost of equity would result in a reduction of 5.6%. Mathematically, the calculation is correct. However, Mr. Reilly explained that Duff & Phelps and numerous professors and educators had professed the importance of the small risk premium to the discount rate when valuing small firms.

Respondents questioned the development of the small risk premium utilizing Petitioner's Exhibit at page 55 from the 2016 Valuation Handbook. Mr. Reilly used the 10th decile. There are some in the 10a and 10b that may have negative income. He opined that they tend to be small startup companies. Tenth is a much larger group, and that is why it's one of the ten deciles.

When questioned in MERC, the Court found, "At trial, Eyre identified problems with Reilly's use of the build-up method. First, Eyre explained that the build-up method is traditionally used in situations in which there are 'no comparables out there from which to derive betas.'"[62] Mr. Reilly disagreed. "[I]t's often used in the same manner we did, where you're looking at developing multiple data points. It's another way of calculating cost of equity and it's discussed in ASA textbook Valuing Machinery and Equipment."[63]

The respondent in MERC also criticized Reilly's use of a corporate bond rate considered riskier than U.S. Treasury bonds. Mr. Reilly also used a low-risk corporate

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[62] *Minnesota Energy, supra*, at 796.
[63] Tr. 4 at 778-779.

bond yield in the buildup method for Siegel. Mr. Reilly testified that "the risk inherent in

Sigel's – a wind farm operation would be in line with the risk associated and the

expectations of a corporate bond investor."[64] Respondents' counsel asked Mr. Reilly

whether he accounted "for lower risk in your CAPM method by selecting a beta that was

less than 1.0; correct?"[65] Mr. Reilly answered:

> It's a different formula, because you're using a government bond and
> subtracting that from the long-term stock return. There's lower risk there so
> you – and less volatility, which beta, if you remember from my testimony is
> a measure of volatility. So, the beta in the CAPM formula is used to adjust
> for the volatility systematic risk that the corporate – or the government bond
> doesn't adjust for. The corporate it's inherent in and why beta is not included
> in the buildup method is that the volatility is already assumed in the
> corporate bond rates because it's not a government bond.[66]

The discount rate for the direct cap rate in the 11th year was questioned. The

level was normalized after the tenth year. The discount rate was 10%, minus 2%

growth for 8%. Mr. Reilly disagreed that when valuing a property with a finite life, the

direct cap rate must be adjusted.

Mr. Reilly's sensitivity DCF was questioned. He emphasized that it did not impact

the property's value. It was for insight into how cash flows could be affected if renewable

portfolio standards were repealed or solar became a better option or PPA pricing went

away.[67] The subject would be selling at MISO as a merchant plant to see the impact.

Respondents indicated that PPAs, when agreed upon, are a set contract rate. Mr. Reilly

determined a $43 PPA price. The MISO average would have to be $43, which is not

close. He explained the whole point of PPA's is to compensate the plant for justifying

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[64] Tr. 4 at 783.
[65] *Id.*
[66] Tr. 4 at 783-784.
[67] Petitioner's Exhibit 1 at 61.

their construction. Half of the cost of the PPA is to cover capital costs and the federal

tax incentives combined to justify the cost of construction. He opined that PPA's could

be canceled or bought out.

Respondents questioned Mr. Reilly on his replacement cost in GenOn, a case

from the Ohio Board of Tax Appeals in 2016. The 2016 replacement cost was $1,708

per kW. The sources were DOE's 2016 Wind Technologies and NREL's 2018 Annual

Technologies Baseline report. Mr. Reilly considered but did not use EIA for (2016 at

$2,234 per kW) estimates. The NREL categorizes cost by wind resource Sigel is located

in Zone Seven.

The estimate for a 2018 cost for wind installation was $1,641 and declining each

year. Based on the 2018 installed cost for wind.[68] An ITC reduction of 30% reduced

Petitioner's RCN. It is a choice for the property owner to choose either the ITC or PTC.

The PTC is preferable when the wind is strong. DTE selected PTC for Sigel; however,

the cost approach determines whether Sigel is purchased or build a new plant. The

most they are going to pay is the cost to build minus the ITC. The PTC benefits an

owner on the back end. Mr. Reilly stated, "I'm saying anyone buying Sigel would not pay

more for Sigel than they could build a plant less the 30 percent ITC."[69]

The average physical depreciation of 25-years was questioned, and Mr. Reilly

stated that DTE "expects to maintain its wind parks for years beyond typical PPA terms .

. . ."[70] The difference is physical life versus continuing CAPEX under the cost approach,

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[68] Respondent's Exhibit 69 at 124.
[69] Tr. 4 at 805.
[70] Tr. 4 at 808; Respondent's Exhibit 47 at 3.

replacing gearboxes, elements that require replacement. Mr. Reilly, in the cost approach, considers the physical life of the assets without replacements.

Respondents questioned the economic obsolescence of 23%, after a $35.3 million deduction for ITC equaling a 53% reduction for a RCN of $89 million. Mr. Reilly disagrees because the $30 million PTC was added.

Generally, the shortfall analysis was the same approach used for the income approach. However, if Mr. Reilly underestimated the amount of electricity or the PPA of $43 per MW, it would also be reflected in the income shortfall. Operations and Maintenance (O&M) does not carry over from the income approach from the new modern plant, not the subject. The 2017 NREL Annual Technology Baseline report was used to calculate operating expenses for a new facility. NREL includes CAPEX that would be CAPEX under their O&M expenses. The five-year MACRS accelerated depreciation was used as Mr. Reilly did not believe that the 50% bonus depreciation was enacted until Trump's tax law change.[71]

When questioned why DTE would pay $157 million for Pheasant Run II, Petitioner answered they bought out the PPA ($49.24) based on 2013 market conditions. The most significant benefit is it had 10-years of PTCs.

Mr. Reilly was asked to explain the cause of external obsolescence is, "The change in the market conditions, the lowering of LCOE and PPA prices in the recent years, which is based off the lower construction costs and the lower construction - yeah, I'll leave it at that."[72]

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[71] The income shortfall analysis considers a new facility, not the subject property.
[72] Tr. 4 at 812.

The PTC is not added to the shortfall DCF. The contributions and value of the PTC are separated so the reader can see the impact. If they were put into the earnings shortfall, the same value conclusion would be reached.[73]

A sensitivity cost approach and a sensitivity DCF analysis simulates the subject operating as a stand-alone facility in MISO without a PPA contract. Neither the sensitivity cost approach nor the DCF sensitivity analysis was utilized to develop the opinion of value. But they were completed to show the reader the effect of a repeal of the renewable portfolio where solar became less expensive. The resulting estimates are to show the reader the impact on the wind industry.

Mr. Reilly explained why Pheasant Run II would require adjustments for PTCs and other adjustments for use as a comparable in the sales approach. Although the sales comparison approach was considered but not performed, it did not indicate value. One of the differences is ten years of PTC based on 2013 and 6-7-years' worth at Sigel. Market conditions, construction dates, revenues, operating expenses, CAPEX, are all components that go into the market condition adjustment considering the delta and time.

The use of PPA's is based on costs; some entered into before completion of construction. Wind park costs are declining as of the tax date for projects that have not been built. The trend estimates that PPA and LCOE prices will continue to decline as construction costs are a variable for calculating LCOE prices.

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[73] Petitioner's Exhibit 1 at 76.

Mr. Reilly was asked if MPSC considers the consequences when a PPA expires. At the end of the 15-year contract for Apple Blossom, the parties could negotiate another contract at market rates. [74]

Mr. Reilly confirmed that the appraisal used many LCOE's as MPSC refers to LCOE's in all the wind park approvals for utility companies. The capacity factor for the subject remained the same. However, as equipment ages, the capacity factor should decline as equipment fails.

The DCF calculations show a 10-year projection period. [75] The generation and capacity factor reflect the amount of energy/power that Sigel produces each year. Row 9 is revenue PPA and price per MWh; the total revenue is row 12. Operating income begins on row 13, with some corporate income included—depreciation and amortization with a total operating at line 19. The operating income and then line 19, EBIT, Income Taxes are deducted for a net income. Depreciation and amortization are added back, PTCs are added (they expire in 2022). Row 24 is CAPEX, then free cash flow and the summation of how the cash flows consider revenue, expenses, and depreciation. The present value of the cash flows over the 10-year period. Row 30 is the sum of the ten years, at $63.4 million. The projection period ends at ten years (although the subject will last longer). The cash flow is stabilized at $3 million, divided by the 8% capitalization to equal $38 million divided in year ten. It is present valued at $15.4 million, which is $38 million x .4044, the present value factor in year ten. "So, what we're saying is that year ten present value back in year one is the $15 million, and if you look at row 31 you'll see

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[74]Tr. 4 at 854; Petitioner's Exhibit 9 at 9.
[75] Petitioner's Exhibit 1 at 115-116.

that same number. So, we're saying the value of the cash flow is beyond year ten into

perpetuity is basically the $15 million. And we add that to the ten years of cash flow.

That's $63 million to get to a business enterprise value of $78 million."[76] Deductions are

made for working capital and intangible assets to result in a value of $74,000,000, as of

December 31, 2015.

Mr. Reilly testified although the same methodology was used for the December

31, 2016 tax date, some variables changed, resulting in $75,000,000.

Kevin Reilly – Rebuttal Witness

Respondents recreated Petitioner's valuation model and related it to RCN and

annual capacity factor. Comparing it to Mr. Reilly's cost approach sensitivity (Petitioner's

Exhibit 23) includes both economic and the impact of functional obsolescence and

delineating the impact of both. Mr. Kettell (Respondent's Exhibit 90) rebutted

Petitioner's RCN valuation model and, based on their 55.9% capacity factor, eliminated

economic obsolescence as of December 31, 2015. It assumes that all of the

obsolescence is economic.

Mr. Reilly went through his exhibit, which shows the cost approach summary for

December 31, 2015. Page 1, line four shows economic/functional obsolescence

combined at 31%. Petitioner's exhibit 23, at line four on page three, delineates

functional obsolescence at $6.8 million, and line five is economic obsolescence of 23%,

which is $18.2 million. Respondents' exhibit 90 eliminates Petitioner's functional

obsolescence as of December 31, 2016, as found on page eight. Mr. Kettell's annual

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[76] Tr. 1 at 146.

capacity factor was 55.9%; Mr. Reilly consistently used the annual capacity factor for

2016 of 42.7% throughout the report.

Dr. Hal B. Heaton

Petitioner presented testimony from Professor Hal B. Heaton. Professor Heaton

lives in Provo, Utah. He has been a professor of finance at Brigham Young University

since 1991 and has also taught at the University of Santa Clara. Professor Heaton has

a dual degree in mathematics and computer science and an MBA from Brigham Young

University. He also has a master's degree in economics and a Ph.D. in finance from

Stanford University. Professor Heaton's expertise includes valuation and its various

subtopics, including the cost of capital, forecasting cash flows, tax effects, and

regulatory impacts. He has provided consultation services to several businesses in

different industries but has focused heavily on commercial banking.

Professor Heaton has held numerous executive seminars for various banks,

including Citibank, Nation's Bank, Bank of America, First Pennsylvania, JP Morgan, and

Standard Charter. He has published several articles on discount rates and lectured on

the use of discount rates in the income approach, including the DCF approach and

determining the cost of capital. Professor Heaton has attended the Wichita Forum on

Property Tax Appraisals for nearly 30 years and has presented in both the

fundamentals and the advanced section. He has also presented at the National

Association of Property Tax Representatives, Western States Association of Tax

Assessors, and the Institute for Professionals in Taxation. Professor Heaton has

received the Karl G. Maeser teaching award, as well as various awards from student

organizations and other programs, and has been qualified as an expert witness on discount rates and the income approach nearly 50 times.

Based on his experience and training, the Tribunal accepted Professor Heaton as an expert in the financial principles applied in the income approach, including the proper development and applications of discount rates, the WACC, and capitalization rates.

Dr. Heaton stated that he believes that Mr. Kettell made judgment calls that he disagrees with, as well as errors that violate sound fundamental principles in addition to mistakes that an informed buyer or seller would not make. He discussed *The Appraisal of Real Estate* and other texts that conclude that if there are differences between what you are valuing and where the data comes from and adjustments must be made. The subject property is tiny when compared to his comparable guideline companies. He discussed Petitioner's Exhibit 110 in which he graphed the revenues of Respondents' comparable companies contrasted to the multi-building comparables.

"Risk is the key factor driving discount rates. And so, when they assess risk they give you a credit rating and the companies with lower credit ratings will pay higher rates of return on those instruments."[77] Citing corporate ratings criteria, Dr. Heaton stated that:

> Company size and diversification often plays a role. While we have no minimum size criterion for any given rating level, company size tends to be significantly correlated to rating levels.

> This is because larger companies often benefit from economies of scale and/or diversification, translating into a stronger competitive position. Small companies are, almost by definition, more concentrated in terms of product, number of customers, and geography. To the extent that markets and

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[77] Tr. 7 at 1338-1339; *Standard & Poor's* Corporate ratings criteria.

regional economies change, a broader scope of business affords protection.[78]

The smaller companies describe Sigel. The size adjustment from the larger companies as compared to one single wind park by Mr. Kettell is woefully inadequate. This also affects both the CAPM and understates the equity rate. Dr. Heaton explained the discount rate is a WACC. They were weighing the proportion of funds from debt multiplied by the cost of debt and the percentage of funds from equity from the cost of equity. Because there is no direct way to get the cost of equity, the comparables may contain data to be extracted and adjustments made.

Mr. Kettell's 3.58% comes from Duff and Phelps under "Micro-Cap" deciles 9 and 10. In contrast, Mr. Reilly uses 5.6% from the 10th decile.[79] Mr. Kettell justifies his position as:

> We select this size premium based on our estimate that Sigel Wind Park is a small division of a large publicly-traded utility company whose operations, particularly methods of recovering sunk costs and generating returns, are largely regulated and assured.[80]

Dr. Heaton disagrees with Mr. Kettell as Sigel is very small compared to Mr. Kettell's comparables. The potential buyer is irrelevant.

A very large company has a low risk akin to treasury bonds (one-way money is raised) or the cost of capital. Again, the subject is tiny compared to the entirety of Detroit Edison. The risk of cash flows that come from the individual wind park is that the cash flow is discounted, not Detroit Edison. The size premium used by Mr. Kettell is part of a liquidity issue. The smaller companies earn a much higher rate of return than the

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[78] Tr. 7 at 1,338-1,339.
[79] Tr. 7 at 1,341; Petitioner's Exhibit 13 at 26, Reilly work papers.
[80] Respondent's Exhibit 1 at 60.

bigger ones because of the liquidity. The premiums are over the large-cap companies.

The Duff & Phelps data is extracted from the difference between large-company stocks

and small company stocks.[81] Physical property is less liquid for small company stocks.

The opinion was that Mr. Kettell's size premium of 3.58% should have been, at

minimum, the 5.6% from Mr. Reilly or larger.

The 10th decile of small companies does not indicate that they are not profitable.

General Motors and Chrysler are big companies that went into bankruptcy. The 10th

decile is based on smaller individual companies.

Mr. Kettell's adjustment for liquidity of property is inadequate. Liquidity is based

on how easily something sells. If it's expensive to sell and takes an extended period to

produce, the investors require a higher rate of return. Dr. Heaton gave the example of a

security's ability to be sold in seconds, but a physical property is like a million-dollar

house versus million dollars of stock. The house will require a realtor fee, title insurance,

and recording fee, not including the amount of time it will take to find a buyer. The

house will sell for a lower price, take longer to complete the transaction, and at a higher

cost. In contrast, the stock is $4.95 for the transaction and sells in seconds. An investor

will require a higher rate of return on the house, and a lower price is the liquidity

discount. The stock trades at the million dollars, with less risk.

Mr. Kettell's multi-stage dividend growth mode is substantially lower than the

equity rate that Mr. Reilly utilized. Dr. Heaton opined that it would be about the same as

Petitioner's if it were done correctly. The discount rate sought for Sigel, which is needed

for the return on equity, is not available for wind parks. The alternative companies

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[81] Petitioner's Exhibit 13 at 26.

utilized looks at the rate of return investors require on these stocks. An example is a

stock selling for $100 and declared that they would pay $5.00 for the year. $5 divided by

$100 equals a 5% cash return. If the earnings are growing, stock prices should grow

with the revenues. If earnings grow at 10%, the stock at year-end is $110, plus a 5%

cash payment for $115 or 15% return (based on the $100 at the beginning).

Dr. Heaton explains Mr. Kettell's flaw utilizing Ameren as the example. Ameren

expects a 4% dividend with earnings growing at 7%. Mr. Kettell uses the 7% for the next

ten years. However, you would expect a 4% plus 7% return of 11% for ten years. Mr.

Kettell looks at individual shareholders and their earnings per share growth. Mr. Kettell

says the economy is going to grow at 4%. Equaling 2% inflation and 2% real growth.

For the remainder of the analysis, he uses 2%. Which is below the Gross National

Product (GNP), which is not rational. Mr. Kettell's selected growth rates for his divided

growth method are split; the first ten years is 7%; the next 30 years are at 2%. Dr.

Heaton explains, although it is part of Mr. Kettell's notes that:

(1) Selected growth rate represents a single, sustainable (50-year) rate.

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(3) "A" rates provided by Value Line as of the Assessment Date.
(4) "B" is the midpoint of "A" and "C".
(5) "C" is half of the projected nominal GDP as of Assessment Date,[82]

"[T]here is no economic reason to believe that this industry will grow at half the rate of

the economy. It just makes no economic sense. It's not happened historically. There's

no reason to expect it to happen in the future."[83]

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[82] Respondent's Exhibit 1 at 53.
[83] Tr. 7 at 1,354.

Dr. Heaton's position on Mr. Kettell's assumption that dividend levels remain the same as growth falls violates fundamental financial rules. He explains the calculations in a regulated utility with an allowed rate of return of 10% as:

Assuming $1,000 in period zero ending assets,
10% rate of return is $100,
Demand for electricity is going up 7%, they can't pay out 10%,
Therefore, $70 of the $100 is necessary to reinvest in new plant and equipment,
Payout equals investors $30 retain $70,
At year end $1,070, ($1,000 + $70).

Total return is 7% due to value of stock because of retained earnings and the 3% dividend is a 10% return. Year two begins with $1,070 split 30/70. Dr. Heaton states, "Mr. Kettell says, no, that's not what's going to happen, okay? The extra – when the growth comes down I guess that extra money just vanishes into thin air, okay? He doesn't - that return comes down to the 6 percent you can see in the prior page graph. He assumes that those returns come down. No, you're still earning your 10 percent allowed rate of return. That, too, is a fundamental error in what he is doing."[84]

The longer the period selected, the lower the discount rate, the lower the discount, the higher value. As an example, Ameren, an average of 10 years, is an 11% return, average 50 years is a 7.5% return, 100 years is 6.75%. Dr. Heaton utilized the selected growth rates from Respondents' appraisal. He notes that Mr. Kettell's use of 50 years is arbitrary, as a wind park lasts 30-years.

When questioned if basic errors were corrected, he stated what the dividend growth model plus size premium would be. Mr. Kettell froze the yield after the first ten years. He does not take it up as the growth rate comes down. It would average 11%.

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[84] Tr. 7 at 1,361.

During cross-examination, Mr. Kettell averaged the analyst's expected growth and added that to the expected growth of dividends, the result is 9.6% and add to that the size premium of 5.6% (from Mr. Reilly) and the range is 14-15%.

Mr. Kettell's CAPM results in a cost of equity too low and, therefore, overvalues the subject property. The three parameters, the risk-free rate, the beta, and the RM minus RF, is the equity risk premium. The difference required for investment risk in the market versus treasuries. The long-term government bonds averaged 6% over 90 years when inflation was 3%. The long-term treasury bonds are at 2.7%; they are only 70 basis points more than inflation; historically, they are 300 basis points more. However, the feds during the recession of 2008 added 3.5 trillion dollars and brought down long-term treasury rates. The treasury bond rate is artificially low. Before the recession, the CAPM and dividend growth were similar. Now, the CAPM is going down. The dividend growth model is staying the same. His CAPM is not giving good numbers.

The buildup method from Mr. Reilly suffers from the historically low T-bond rates. However, Mr. Reilly also does a buildup method with corporate bond rates that were not affected by the feds buying treasury bonds. It is more reasonable with his size premium.

Although Mr. Kettell stated that all betas regress towards one, Dr. Heaton says utilities tend to have betas less than one for many years and are expected to continue. Mr. Kettell started with Value Line (the standard is a five year historical period), but then went to Bloomberg and uses a two-year period. The two-year issue in the industry can be cyclical and insufficient time to pick up a complete risk cycle. This makes the beta more volatile. The full five-year beta is more reasonable.

Mr. Kettell determined that all of his two-year betas are below the five-year betas (if he looked at five-year betas in Bloomberg, the numbers are similar to Value Line). The Guideline Company Betas in Respondents' appraisal shows Value Line 5-year and the two-year Bloomberg betas, Mr. Kettell averaged the two. The results are a midpoint median beta of 0.68 (Petitioner's beta is 0.75).

Dr. Heaton then discussed one of the other components of the CAPM, Mr. Kettell's 5.5% equity risk premium.[85] The risk-free rate is 2.7%, .68 beta averaged from 2 and 5 years, 5.5% equity risk premium, and 3.58 size premium. Duff and Phelps give three numbers for the equity risk premium, a 6.9% historical average, which is how much better is the stock market investment as compared to long-term treasuries. Second is Ibbotson and Chen at 6.03% for supply capital. However, they used a 6.9% historical average in their cost of capital study. The third is irrelevant because Mr. Kettell did not use Duff and Phelps normalized treasury rate.

Other support for Mr. Kettell's equity risk premium includes the Fernandez survey. Dr. Heaton estimated that the sample results get approximately 10% response. He wasn't sure if the sample is unbiased. An example is shareholder litigation, where the shareholders are in flux about a rate of return was below what they require. The result is low. Dr. Heaton opined that "[y]ou could do better by buying a BB bond than getting their equity risk premium. BBs are a lot less risk than the market. So, in any event, you've got to be suspicious of that survey because you get such low response rates, is my bottom line conclusion."[86]

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[85] Respondent's Exhibit 1 at 64, compared to Petitioner's Exhibit 13 at 26.
[86] Tr. 7 at 1,386.

Mr. Kettell also used Dr. Damodaran's publication as one of his sources. Dr.

Heaton went through the issues he found with the report. It begins with Standard &

Poor's number of 2.058.9. It is set to equal the present value of future cash flows. The

cash flow to investors is in two parts, dividends and share buybacks (i.e., cash going to

the investors). It is $100 per year per $2,000 of Standard & Poors 500. It grows at that

expected growth and uses the analysts' estimates; next, the cash flow grows to the ten-

year rate. However, beyond the five-year rate, growth at the risk-free rate is 2.17%. It

does not make sense that inflation is 2%, and GDP is growing at 4% in Mr. Kettell's

report. Projecting the low growth also lowers the equity risk premium to 5.78%; he uses

5.5%.

When asked if Mr. Kettell's income approach values are biased high by errors in

the discount rate, can Mr. Kettell properly conclude that the subject property has no

economic obsolescence?

> Oh, no. Because his discount rates are unacceptable low, that means his
> income approach is unacceptably high. Now, remember how he concludes
> economic obsolescence. He says, I'm going to compare the net book value
> against what the cash flows say the value is supposed to be. Well, his cash
> flow estimate is biased high because of those low discount rates. Had he
> used reasonable discount rates his income approach would have been
> substantially less than net book value and he would have said, oh, there is
> economic obsolescence.[87]

Dr. Heaton explained that Respondent's Exhibit 35 at page 52 is an impairment

study, not valuing the company. The numbers are not intended for what Mr. Reilly and

Mr. Kettell are using them. In addition, the numbers relate to all of Detroit Edison's

assets. Because wind parks are highly dependent on government support and risky, it

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[87] Tr. 7 at 1,389-1,390.

does not always produce electricity when needed. 7% relates to assets less risky than a wind park.

The right side says Valuation Methodology is assuming the stock sale. The share prices include things that underlying assets don't. They are divisible, easy to sell, and more importantly, they include the value from the future. Stock prices sell for much more than the underlying assets.

Upon cross-examination, Dr. Heaton was questioned about Dr. Damodaran and discount rate setting. He stated that he has more experience within the property tax realm, as Dr. Damodaran tends to be valuing stocks and bonds. While the concepts for setting a discount rate are similar, property tax has some different characteristics. As an example, in the property tax realm you are valuing the taxable property. With stocks and bonds, you are valuing intangibles and trading idiosyncrasies that will affect those things. Stocks and bonds trade for a whole lot more than the underlying physical property. You are picking up the value of a customer base with the stocks; however, they are not included in a property tax appeal. Purchasing just the physical integrated property without the existing workforce, for example, costs a ton of money to get a workforce and customer base. When stocks are delivered, it includes everything. Dr. Damodaran's technique indicates that stocks will rise a lot slower in the future than they have in the past. Dr. Damodaran prefers a forward-looking approach. Duff & Phelps normalize the treasury bond rate and comes up with an equity risk premium.

> Q. [Y]ou can't simply determine the level of risk based on the size. In this case, where we're assuming – Mr. Reilly is assuming a long-term power purchase agreement with a regulated utility, you understand that's his hypothetical that he's looking at?
> A. Yes.

Q. The risk for that wind park is pretty minimal when it has – whatever it produces it's got a guaranteed price that it knows it's getting from a regulated utility. That regulated utility will be good to pay, won't it?
A. Okay. You're ignoring the facts of the case. Mr. Kettell went to stocks and bonds of large, diversified companies.
Q. That was not my question. My question—…

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A. It has nothing to do with what Mr. Kettell said. Don't you trust the regulated utility to be able to pay on its PPA?
A. If you can produce. You're only going to sell if you can produce. . . . 60% of the time you can't produce.[88]

Dr. Heaton still believes that Sigel's risk reflects the risk assigned in the 10th

decile. The stand-alone wind park is being valued, regardless of who owns it. It has

limited customers in one location. It is not diversified, akin to other companies. So, it has

more risk. He would not adjust the CAPM but would put less weight on it.

When questioned what his WACC would be, he responded that he had not done that study. Respondents asked Dr. Heaton about various publications and the after-tax WACC. The NREL is the 2015 land-based discount rate for wind projects Nominal is 8.3% after-tax discount rate is 5.7%.[89] The 2016 Wind Energy Review is a nominal WACC of 7.55%. While not disagreeing, he would need to know where they are getting their data and smashing their numbers. It is not incompetency, but the nature of the financing they can get. "So, for example, a number of state governments will encourage banks through the regulatory structure to give favorable finance debt to wind projects. But if I'm trying to value the project from the standpoint of a willing buyer, then I'm going to have to look at normal debt rates. I don't know what they're assuming behind that number."[90]

Upon cross-examination, Dr. Heaton was questioned on Professor Damodaran's

Equity Risk Premium Determinants, Estimations and Implications 2017 edition:

Q: On the issue of using implied versus historical numbers, and when I say "implied", what does that mean to you?
A: That you reverse the set of other numbers to say what number must this be in order to fit with the numbers I can see.

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[88] Tr. 7 at 1,413-1,415.
[89] Respondent's Exhibit 17 at 16.
[90] Tr. 7 at 1,424-1425.

Q: Is it a forward-looking approach?
A: It's typically just a straightforward calculation. Whether or not it's forward looking depends on the data it's using.[91]

Discussing historical versus forward-looking forecast trusts the historical and finds that the standard forecast error for the historical is lower in studies that he has seen. They are more accurate. The drive behind the opinion is what the investors expect." What matters here is the forecast for cash flows. "If you think U.S. companies are going to earn a ton of money current metrics could be just fine, thank you, whether you use a historical data for your discount rate or a forward-looking data for your discount rate."[92]

Q. In order to figure out what the value of that [cash flow] is – that's what we are trying to do; right in the DCF model?
A. Yes
Q. In order to figure out what that is we have to get a discount rate; right?
A. Agreed.
Q. The discount rate is based on a WACC?
A. Yes
Q. And that discount rate will depend on a couple of components, cost of equity and cost of debt; correct?
A. Yes

*   *   *

Q. And to derive those numbers you could either use a forward-looking approach or an historical approach or a combination of the two; correct?
A. I agree.
Q. And this morning I thought I heard you support using an historical approach for those two points. Am I wrong about that?
A. I am recommending you use the historical equity risk premium, yes. [93]

Beta requires unlevering before it is relevered. Dr. Heaton explained "[i]f I look at my comparable companies and they have widely differing levels of debt, there are two

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[91] Tr. 7 at 1,427.
[92] Tr. 7 at 1,431-1,432.
[93] Tr. 7 at 1,432-1,433.

reasons why their historical beta may be higher than other companies'. The first reason

is they've got fundamentally more risk. They've got coal, they've got a nuke, they've got

whatever, ok? The second one is they're – the assets have precisely the same risk but

they have more debt. The higher the debt, the volatile the equity,"[94] a capital structure

issue. He assumes that the comparables have the same tax structure. The federal

government taxes them.

The purpose of unlevering and relevering is to create betas that have a similar

capitalization structure. To unlever means to pull out the effect of leverage on your beta

estimate; to relever is to put it back in for whatever leverage you feel appropriate for the

subject property. The relevered betas is the number used for the subject property from

the estimated optimal capital structure (WACC). The published beta is used to get the

unlevered beta that is then relevered.

Dr. Heaton explained DTE's internal rate for assets, found in its 10-K. It applies

to all of the company's assets unless otherwise stated. Respondents asked, "We

assumed – Mr. Kettell assumed that a large company – diversified company would be

the purchaser of Sigel Wind Park. Wouldn't that be the same situation, similar to DTE?

[Dr. Heaton responded,] Well, again, the buyer's cost of capital is irrelevant."[95]

After Respondents' attorney had no questions left, the Judge asked Dr. Heaton

whether he testified that the 7% for DTE for all of their combined assets and he agreed.

Dr. Heaton explained that if you look on the books, they have a $30 million value.

However, it is a 60-year asset and it is generating a million dollars per year. Two things

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[94] Tr. 7 at 1,439.
[95] Tr. 7 at 1,447-1,448.

have to happen: the first trigger is, can costs be recovered? Since it will live for 60 years, you have $60 million of cost recovery, and it's worth $30 million on the books, so you do not impair it. But the market value is only $10 million. If you hit the trigger, with a 28-year life asset generating a million dollars a year, so you've only got $28 million of cash flow, and it's on the books at $30 million, you are going to impair and value it on the books at $10 million.

Terry Yee

Petitioner presented testimony from Terry Yee. Mr. Yee is the manager of federal, state, and local taxes at DTE. As the tax manager, Mr. Yee is responsible for all compliance taxes, including federal income tax, state income tax, and franchise, sales and use tax, and property tax. Mr. Yee has been with DTE for 15 years, all within the tax department. He has managed different roles within the department, including tax accounting, federal income, indirect taxes, and now all compliance taxes. Before joining DTE, Mr. Yee worked in tax compliance at E & Y for five years and at a mid-sized CPA firm for seven years, for a combined experience of 27 years in tax.

Mr. Yee is responsible for filing the personal property statements on the State Tax Commission (STC) approved forms for DTE Energy. The majority of which is personal property. He testified to the statements he filed for 2016 and 2017, for Bloomfield Township and Sigel Township. The original cost in 2012 relates to the wind turbine. The original cost was $3,240,736, with an addition of $3,272 in 2014. The 2014 addition is Federal Administration Administrator (FAA) lighting which is the light that goes around turbines at the top in accordance with the FAA. The original cost is multiplied by the STC rate 0.7 to get to a TCV, then multiplied it by 50% to get the

assessed value and the TV. The original cost reported does not include any offset by

tax incentives.

Mr. Yee testified that neither Township used the STC multipliers for 2016 and

2017. The Townships utilized Appraisal Economics' multiplier table. The difference is:

STC Form L4565			Wind Table	
Year			STC	Appraisal Economics
1	2015		1.000	0.991
2	2014		0.800	0.906
3	2013		0.750	0.820
4	2012		0.700	0.777
5	2011		0.600	0.743
6	2010		0.500	0.673

When applied to the subject's personal property statement[96]

2016 PP	Petitioner-STC Costs	Multiplier	Indicated TCV	SEV/TV
1.65 MW	$47,900		$47,900	$23,950
Computer Equ	$62,444	0.24	$14,987	$7,493
2012	$3,240,736	0.700	$2,268,515	$1,134,258
Total	$3,351,080		$2,331,402	$1,165,701

AE 2016	AE Cost Table	Multiplier	Indicated TCV	SEV/TV
1.65 MW	$47,900		$47,900	$23,950
Computer Equ	Included with	2012 Eq		
2012	$3,240,736	0.0777	$2,566,571	$1,238,285
Total	$3,351,080		$2,614,471	$1,307,235

The difference in one of the forty turbines between the STC multipliers and AE

multipliers for the tax year 2016 is $283,069 for TCV and $141,534 for SEV/TV.

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[96] 2016 and 2017 Personal Property Statements for Parcel 3226-900-140-00 in Sigel Township used for illustration.

2017 PP	Petitioner-STC Costs	Multiplier	Indicated TCV	SEV/TV
1.65 MW	$47,900		$47,900	$23,950
Computer Equ	$62,444	0.19	$11,864	$5,932
2016	$379,136	1.00	$379,136	$189,568
2012	$2,873,580	0.600	$1,724,148	$862,074
Total	$3,363,060		$2,163,048	$1,081,524

2017 AE	AE Cost Table	Multiplier	Indicated TCV	SEV/TV
1.65 MW	$47,900		$47,900	$23,950
Computer Equ	Included with	2012		
2016	$396,136	0.991	$375,724	$187,862
2012	$2,873,580	0.743	$2,181,466	$1,090,733
	$3,363,060		$2,605,090	$1,302,545

For tax year 2017, a gearbox was replaced and the original one was deducted. The difference is $442,042 TCV and $221,021 TV. Some properties had additions for gearboxes and blades. The new gearbox is added at full cost; the existing gearbox was deducted at its depreciated rate. Mr. Yee testified, in reference to not applying the STC table to the additions and losses, that "[w]e're just following the rules. We just follow the way the rules read it."[97] Mr. Yee was asked if Mr. Reilly valued the entire wind park or just parts of it; he replied, "The entire wind park."[98]

The 2016 projected CAPEX, normal CAPEX, and gearbox replacement from Mr. Reilly's projections total $934,000 (Petitioner's Exhibit 12) and was compared to total expenditures incurred in 2016 of $1,910,595 (Petitioner's Exhibit 26). When questioned what the purpose of Petitioner's Exhibit 18 is, Mr. Yee responded:

The purpose of Exhibit 18 is to just show the differences between what we filed to what we got assessed at and just shows the calculation of

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[97] Tr. 8 at 1,494.
[98] *Id.*

differences between the two. So, where the assessor applied the Kettell rate tables versus what the STC—when we calculated it with the STC tables.[99]

Steven Transeth

Petitioner presented testimony from Steven Transeth. Mr. Transeth is the owner and principal partner of the law and consulting firm of Transeth & Associates, PLLC. He has a law degree and a bachelor's and master's degree from Michigan State University. Mr. Transeth serves a wide range of clients in several states, including public and municipally-owned utilities. He also represents various groups and associations that take on an energy advocation role.

Mr. Transeth has been involved in almost every facet of the energy field over the last 20 years, from transmission to generation to distribution systems, inclusive of policy issues, regulation, and legislation. He first became involved in energy and utility issues when he left the prosecutor's office and joined the Legislative Services Bureau (LSB) in 1987. While at the LSB, Mr. Transeth worked on the Michigan Telecommunications Act and its subsequent revisions and PA 141 of 2000, which introduced the concept of stranded costs. He was also part of the workgroup that resulted in the MPSC's 21st Century Energy Plan, which became the genesis for the 2008 legislation. Mr. Transeth drafted the initial versions of that legislation, and after being appointed to the MPSC in 2007, he helped negotiate and implement PA 286 and PA 295 of 2008.

After his term on the MPSC expired in 2010, Mr. Transeth opened his law firm, adding a consulting component to it that eventually became the focal point of his practice. By invitation of the chair, he joined the Senate Energy Committee as special

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[99] Tr. 8 at 1,503.

counsel and drafted the 2016 amendments to PA 295. Mr. Transeth continued in his

service to the committee through the passing of the bills, assisting in negotiations, and

providing advice and counsel to the Senate as needed.

Mr. Transeth has served on numerous governmental committees related to the

energy industry, including the National Association of Regulatory Utility Commissioners'

critical infrastructure and nuclear committees. He was appointed to the Organization of

PJM States which is an organization comprised of the regulatory stakeholders in PJM, a

RTO that oversees most of the Northeast electrical grid. Mr. Transeth is an instructor for

the Institute of Public Utilities at Michigan State University, a regulatory ratemaking

class internationally known. Mr. Transeth is one of the instructors of this course and

various other courses in rate making, and one of his specialties is regulatory ethics.

Based on his experience and training, the Tribunal accepted Mr. Transeth as an

expert on the legal and regulatory aspects of the Michigan energy industry.

Mr. Transeth, while at the LSB, worked with a workgroup that included the

MPSC, utilities, and all the stakeholders issuing the 21st Century Plan, which was the

genesis for the 2008 legislation (as well as 2016). The governor pushed for renewable

clean energy. While he was available to draft the initial bills, he served on the MPSC,

which implemented Act 3 changes and PA 286 and PA 295. He also was involved as

special counsel to the Senate Energy Committee (2015-2016) and drafted the two bills

which revised the initial bills for renewable energy mandates in PA 295.

The renewable industry was less than 1% in 2008, and now it is 15-17%. The

mandate created a 10% requirement by 2015. The 2016 amendment language is

renewable credit portfolio and increases to 12.5% and by 2021, 15% renewable energy. The amendments to PA 295 had an effective date of April 20, 2017.

The facilities providing renewable energy do not have to be owned by a regulated utility to provide power. The 2008 statute capped at 50% what the utilities could own. In 2016 that changed. When a utility wants to buy or build a new generation facility, an Integrated Resource Plan process was in place and a certificate of necessity. It also required that anything that was capacity related, the utility had first to show it was needed. Secondly, the proposal was the most reasonable and prudent means of achieving the capacity.

Mr. Transeth testified that DTE was required under PA 295 to have 600 MW of renewable energy and 893 MW at the end of 2015. The plan stayed in place until 2018. He opined that the percentages would not have gotten into the legislation if the utilities had not represented that the levels could be met. The renewable energy mandates in PA 295 can be met by purchasing renewable credits from others or purchasing renewable energy from other providers.

When questioned on how a rate-regulated utility recovers cost of compliance with the PA 295 mandates, Section 47 outlines it. Mr. Transeth explained:

> [W]hat we did is we set up a system in which we were going to run some of the costs of these renewable energies through PCRA . . . it's the Power Supply Recovery Act. . . . there are going to be certain costs, if they can be identified, that are going to exceed what you can get through the cost recovery - normal ratemaking – that goes through the general ratemaking process. And anything that's called an increment cost over and above what they're going to allow to be recovered through – in 2008 and be a surcharge of a nature.

> [I]t is capped under Section 45 . . . for the residentials it was $3.00. It also . . . correlates to Section 49, which is the reconciliation section.

> [A]fter you go through this whole process you're going to make certain claims and going to have certain recovery. Then annually you have to go to the commission and those figures are reconciled either up or down based upon what your actual numbers were.[100]

Regardless of what is covered under the normal recovery mechanism there is always a review process and subject to reasonable and prudent expenses. You have to show that you are not adversely affecting the ratepayers or adversely reflecting rates. If it is at any time affecting rates in a negative fashion you have to go through a contested case and you have to show in fact what you are proposing to do is reasonable and prudent.[101]

Reasonable and prudent is determined at the time of the decision, using the available information. Otherwise, the utilities would be in financial distress and an unreasonable burden if it is second-guessed five years later. After the commission determines reasonable and prudent, the costs remain with the utility throughout the lifetime of whatever the approval period is.

Mr. Transeth keeps up with trends in the energy industry, as he was the editor of *This Week in Energy News* with 5,000 subscribers. He testified that the direction of construction costs for wind parks is going down drastically. One plan estimated the cost of $2,000 per kilowatt, and then the numbers came in at $1,600. He then discussed Pine River Wind Park (Case U-18111), which was part of their renewable plan. As of December 31, 2015, the MPSC approved $1,615.

When questioned if a regulated utility sought MPSC approval to purchase Sigel as of December 31, 2015, would MPSC assess the prudence of the purchase price

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[100] Tr. 8 at 1,559-1,560.
[101] Tr. 8 at 1,561.

under conditions that existed as of that date or the conditions under which DTE made the original investment in the property? "It would never be looked at with blinders. Any kind of decision would be looking at the totality of the circumstances surrounding it at that moment in time."[102]

Mr. Transeth explained primary factors that MPSC would consider in determining whether a utility could recover the purchase price of an asset through electric rates. One of the avenues that the commission considered is Pine River. "Literally within a few weeks of the - what you're listing as the valuation date they made a decision. The kW was worth $1,615. I can't image that would find an order – other circumstances and issues that may come into play, but it would be around that figure."[103] They would not give any weight to what DTE had invested in the property during its ownership.

> One of the things I've noticed in just some of the pleadings I read and has come out of Respondents, there seems to be some kind of concept that these utilities are fungible, they're interchangeable. Each utility is treated quite separately and the – and each utility is going to be – its ratemaking process, its rate base, what we allow for the WACC percentage return, all of those are going to be very utility specific and unique.
>
> So you would never have a situation where you would be considering one buyer, whether it's Consumers buying something from DTE, whatever those costs and factors were of DTE's would have an impact on what Consumers – Consumers would be looked at, okay, what is the fair market value if you went out – and by the way, they would have to go all through the process I told you before.
>
> They have to show that they need it first, then they would have to show is this the most reasonable and prudent means of achieving that capacity. And part of that would be looking at can you get a PPA cheaper than what it would cost to buy Sigel. Can you build brand new cheaper that what you would do Sigel.[104]

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[102] Tr. 8 at 1,564.
[103] Tr. 8 at 1,565.
[104] Tr. 8 at 1,565-1,566.

Each utility is treated differently. PA 295 does not allow an above-market price.

DTE already met its obligation in PA 295. For example, the MPSC would not approve

$2,200 a kW at the end of 2016, after the Pine River order that a kW is worth $1,615.

PA 295 does not assure a buyer of Sigel a guaranteed amount of income. PA 295

provisions go the utility, not the facility. DTE and Consumers each have their own

individual unique benefits in PA 295. MCL 460.6q requires MPSC to approve a sale,

transfer, or merger of utilities and their assets.

Stranded costs is a regulatory term of art created in the 2000 statute. It is

specifically related to a certain cost that resulted from a regulated market to a

deregulated market.[105] In 2000, the customers purchased their energy from an

alternative electric supplier. When you use stranded costs, you are not talking about any

kind of loss. Stranded costs do not necessarily mean unrecoverable costs. It just means

costs that need to be accounted for.

Mr. Transeth discussed Mr. McGarry's report, indicating that to get to the

revenue requirement in 2016, a PPA would have to be $75 per MWh. He reviewed

MPSC order for Apple Blossom PPA (U-15805). The November 19, 2015 MPSC order

was $43 per MWh. He does not believe that MPSC would then approve $75 per MWh,

after Apple Blossom's $45. It would not fit the mold of reasonable and prudent.

Utilizing Mr. Slater's testimony explaining DTE's filing with MPSC, the rate base

is adjusted to deduct accumulated deferred income taxes and prepaid taxes. Mr.

Transeth explained they do it from the net plant for rate base.[106] The renewable energy

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[105] Tr. 8 at 1,571.
[106] Tr. 8 at 1,575.

plan rate is required to match the pre-tax cost of permanent capital used to calculate the return on base rate. The 2015 rate base was reconciled to 11.16% and in 2016 it was 11.12%.

DTE and Consumer's Energy do not calculate the rate of return and rate base with renewable energy plan the same. Mr. Transeth testified that Consumer's rate base of 8.70% (December 2014 to March 2017). He looked at the methodology for each and the two ways how the deferred federal income tax is accounted for in rate base. You either have to take it off-net, which will impact the WACC, or take it off the WACC, which will impact the net. And both of those together result in a particular revenue requirement. Mr. Transeth was questioned why Consumer's Energy 8.77% was different than DTE's 11.63%. The reason is because of how they treated the federal income tax. Consumers used the deferred taxes and applied them to the WACC percentage; December 2015 to March 2017 was 8.94%, and March 2017 forward it was 8.70%.[107] This is the difference, Consumer's did not take an adjustment for federal income taxes in their rate base; they adjusted their WACC to account for it. Based on Mr. Slater's testimony in DTE, the rate base is adjusted to deduct accumulated deferred income taxes and prepaid taxes.

Mr. Transeth explained that Petitioner's Exhibit 111 shows the straightforward formula with two options, DTE takes the deferred federal income tax off the net plant or Consumers takes it off of the WACC. He testified:

> The problem, if you look at Mr. McGarry's chart, he did not account for that same deferred federal income tax off of net plant, so he has an inflated net plant. And what happens . . is as one goes down . . . the other one goes up.

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[107] Petitioner's Exhibit 102, the rate that is on Respondent's appraisal, the other rates are Mr. McGarry's work papers.

> . . . So the problem is he did not account for the deferred federal income tax in either the net plant or in the pre-tax WACC. That results in an inflated revenue requirement.[108]

Property taxes are an expense item and then through rates as part of O&M. If a regulated utility received a windfall, it would be adjusted going forward, in a rate case. Mr. Transeth was questioned what happened in 2000 with deregulation.

> The problem in 2000 is there was actually a need for new generation and it did spur, by the way, the 2000 legislation and the renewable, a whole slew of independent and merchant generation plants. Mostly smaller plants, peaker plants, 200 megawatts under, which, by the way, was some of the problem why we went into the 2008 is almost every single one of those independent plants went bankrupt.[109]

He was not aware of any regulated utility selling one of its assets at the cost of 38% below the net plant in service. When questioned if DTE were to sell Sigel for $50 million less than its net plant in service, could it write it off the books? Mr. Transeth responded yes, it affects the shareholders; it does not hurt the ratepayer. The company would acquire $77 million or whatever is in their capital, and the rest can apply to MPSC for recovery. Securitization is a different way of acquiring a certain amount of money when you do it through bonding, and it's cheaper for the ratepayer. It could go through the rate case as an approved, just, and reasonable expense. However, they would likely approve 50%. MCL 460.6q deals with mergers and acquisitions and the sales of an asset by a regulated utility. The regulated utility would be prohibited from selling Sigel without having prior approval from MPSC. If sold without prior approval, they would not be able to recoup any costs.

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[108] Tr. 8 at 1,584-1,585.
[109] Tr. 8 at 1,594.

Mr. Transeth testified that it is advantageous for regulated utilities to own their

wind parks in lieu of a PPA in most circumstances. The PPA payment for electricity is

treated as an expense and is not included in the rate base. The incentive would also be

lost if DTE sold to an independent power producer (IPP) and negotiated a PPA to

purchase back the electricity as the wind park would not stay in DTE's rate base.

RESPONDENTS' CONTENTIONS

Respondents agree that Sigel first became operational on December 21, 2012.

Sigel is part of the Thumb Wind Park, with 69 wind turbines for 110 MW renewable

energy production. However, Sigel is a separate facility, and the unit basis of valuation

has been used. It is a unique special-use property. It has never been appealed, and

there are no Tribunal cases. There are a few cases in other states. Currently, 16 wind

park appeals are pending.

The wind park under the Michigan statute is defined as a wind energy system.

After deducting the real estate, metrological tower, substation, and operations building,

the tower base and nacelle are left to be appraised. Essentially, it is a big box at the top

of the tower. It has a transformer, a step-up transformer, a step-up transformer at the

base, and of course, the base. The rotors and the turbines from base to tip are 499 feet

high.

The renewable energy statute was adopted in 2008. The STC was responsible

for how each element of a wind energy system would be classified. Originally it was

thought to be real estate but resulted in industrial personal property. The legislature

defined a wind energy system as personal property, but it still had to decide if it was

utility or industrial. Although it looks like a power production utility unit, the STC

classified it as industrial personal property. This was a huge advantage as there are no

school education taxes or local school tax, which gives them a 24 mill advantage.

This is not an appeal of the classification. The property is an industrial personal

property with some real and utility (the transmission lines and underground connection

lines that take it from the turbine to the substation). Values have been stipulated for the

real estate, the utility, and the met tower (a deduction from the unit value). They agreed

on how to allocate the turbine portion to the specific turbines. The assessors have come

up with slightly different values for each, based purely upon improvements and

replacements reported.

One key issue is the huge difference in how Mr. Kettell approached the appraisal

from Mr. Reilly's appraisal. Mr. Kettell utilizes the subject as a regulated utility with no

PPA. It's all based on plant in service and net plant in service. That's the income for this

property and any buyer with a similar regulated utility, like Consumers.

A market exists, and a submarket sells to another utility or another company that

falls under PA 295 regulations. Mr. McGarry, MPSC expert, culled through EIA

documents, the report, 10-ks in an attempt to derive how much money the regulated

utility is making on this property.

Anyone purchasing this property will have certain things to be considered in

connection with the highest and best use, willing seller, willing buyer, forced sale, all

sorts of concepts that are critical to a proper appraisal. Respondents opine that the

approach elected by Mr. Kettell is the appropriate approach for this property and this

type of property because any sale would have to be approved by MPSC. Mr. Kettell

considered, but Mr. Reilly did not consider, all of the sources of income that a willing

seller would receive. An example is a sale to Consumer's Energy; what would they pay? If they sell it for less than the net plant, there will be stranded costs, which have to be approved by MPSC. Respondents believe that scenario would have a zero chance of approval. If Consumer's Energy purchased the subject properties for the net plant value, there would be no stranded costs. You would have another utility that is the same submarket buying that, and no issue with the public paying higher rates.

Respondents continue that Mr. Reilly has a hypothetical seller and a hypothetical buyer with a hypothetical PPA to be negotiated. But in actuality, the market is the sale of an asset that is operating under PA 295. Both parties agree the highest and best use is a wind park. Under the highest and best use, the sales have to reflect the highest economic return to the seller.

The willing seller will have to consider stranded costs in Mr. Reilly's approach if DTE were to negotiate $43 PPA, which was concluded to in his value. The stranded cost is going to have to be taken care of by the owner. If MPSC were to approve the stranded cost, the ratepayers would reimburse DTE for the difference. The stranded cost is $50 million. It has to be made up, or there is not a hypothetical buyer in the hypothetical market.

Respondents are asking the Tribunal to look at the law and the facts under highest and best use. It has to be a legal transaction, resulting in the highest price. Mr. Kettell's approach is the only approach that can be considered and is slightly higher than the assessed value. This is the way that Respondent thinks that utility property should be appraised. Respondents contend that the subject property is not assessed in excess of 50% of its TCV.

RESPONDENTS' ADMITTED EXHIBITS

R-1:   Valuation Disclosure, Appraisal Economics
R-3:   Curriculum Vitae of Michal J. McGarry, Sr.
R-4:   Documents-MJM Consulting, LLC
R-9:   Bloomfield Township Personal Property Statements, Wind Energy System Reports and Utility Personal Property Reports-2016
R-10: Bloomfield Township Personal Property Statements, Wind Energy System Reports and Utility Personal Property Reports-2017
R-11: Sigel Township Personal Property Statements, Wind Energy System Reports and utility Personal Property Reports-2016
R-12: Sigel Township Personal Property Statements, Wind energy System Reports and utility Personal Property Reports-2017
R-17: 2015 Cost of Wind Energy Review-National Renewable Energy Laboratory
R-18: 2016 Cost of Wind Energy Review-National Renewable Energy Laboratory
R-19: Report on the Implementation of the PA 295 Renewable Energy Standard and the Cost Effectiveness of the Energy Standards
R-22: 2018-2019 Uniform Standards of Professional Appraisal Practice
R-24: Cost of Service Ratemaking-MPSC
R-32: Form 10-K for year ending December 31, 2012
R-33: Form 10-K for year ending December 31, 2013
R-34: Form 10-K for year ending December 31, 2014
R-35: Form 10-K for year ending December 31, 2015
R-36: Form 10-K for year ending December 31, 2016
R-37: Form 10-K for year ending December 31, 2017
R-43: DTE Application for Authority to Amend its Renewable Energy Plan Approved in Case NO. U-17793-MPSC Case No. U-18111
R-44: MPSC Case No. U-18082-DTE 2015 Recon
R-47: MPSC Case No. U-18232-DTE's Consent to Changes to its Renewable Energy Plan
R-48: MPSC Case NO. U-16582-DTE's application for Ex Parte Approval of Renewable Energy Contracts
R-64: DTE Presentation to the Huron County Planning Commission-The Year in Review 2013-Sigel and McKinley Wind Parks
R-65: DTE Presentation to the Huron County Planning Commission – September 2017
R-66: Report on the Implementation and Cost-Effectiveness of the PA 295 Renewable Energy Standard
R-69: DTE 2017 Integrated Resource Plan-Exhibits of Kevin J Chreston-MPSC Case U-18419
R-74: EvcValuation Engagement Letter (Confidential)
R-75: EvcValuation Document Request to DTE
R-76: DTE Response to Appraiser Questions 1
R-77: DTE Response to Appraiser Questions 2
R-78: Map-Michigan Annual Average Wind Speed at 80 m
R-86: EVC Income Approach Sensitivity Analysis
R-87: Sigel Discount Rate Comparison

R-88: PR II Comparison of TCV-EVC vs. AE
R-90: EVC EO Exhibit
R-93: Assumptions to the Annual Energy Outlook 2017-US Energy Information Administration
R-94: 2015/2016 comparison summary
R-95: Joseph Kettell business card, Article: "Government Incentives and the Valuation of Wind Parks
R-96: General Property Tax Act Excerpt, 2015 Form L-4175, STC Bulletin No. 12 of 1999
R-96A: 2015 Form 4655
R-97: 2018 Form 4565

RESPONDENTS' WITNESSES

<u>Michael J. McGarry</u>

Mr. McGarry is employed as the principal of MJM Consulting, LLC (MJM) in Simpsonville, South Carolina. He has a BA in economics from Potsdam State University and an MBA from the University of Buffalo. Mr. McGarry has 38 years of utility regulatory experience in both the public and private sectors. He has conducted over thirty audits of investor-owned energy, telecommunications, and water utilities. These audits have included comprehensive management audits and operational audits on most utility functions, including corporate governance, strategic planning, internal auditing, capital and operating budget process and practices, distribution operations and maintenance, fuel procurement, supply chain management, demand-side management, crew operations, affiliates transactions, commodity trading, and construction program practices.

Mr. McGarry has been in his current position since July 2017. From 2004 to 2016, he was president, CEO, and co-owner of Blue Ridge Consulting Services in Greenville, South Carolina. From 2003 to 2004, Mr. McGarry was vice-president of East Coast operations with Hawks, Giffels & Pullin, HGP. He was responsible for developing

and overseeing client engagements in utility regulatory affairs and management audits, and rate case management. From August 2001 to 2003, Mr. McGarry was an independent consultant working on various projects, including renewable and update of delivery service tariffs for Illinois Power Company and several utilities' street lighting cost-benefit assessment projects. From June 2000 to August 2001, he was a senior consultant for Denali Consulting, a utility supply chain firm and procurement and implementation firm. From 1997 to 2000, he was employed by Navigant Consulting and several of its predecessor firms, working on several different projects, including management audits and the original delivery service tariff filing with Illinois Power, which divested generation, separated the tariffs into functional tariffs between the distribution, transmission, and generation. From 1985 to 1997, he was employed by the New York State Department of Public Service in the utility operations audit section, in which he conducted focused operational audits in many facets of utility operations for all sectors of the utility industry, including gas, electric, telecommunications, and water. Before that, he was a rate analyst for Orange & Rockland Utilities in lower New York from 1981 to 1983 and Seminole Electric Cooperative in Tampa, Florida, from 1983 to 1985.

Mr. McGarry has testified in numerous proceedings in Arizona, Delaware, Georgia, Illinois, Maine, Maryland, Michigan, Missouri, New York, North Dakota, Nova Scotia, Ohio, and Utah. Michigan proceedings include MPSC Case No. U-17689, wherein Mr. McGarry has served as project manager and a testifying witness on behalf of the Michigan Attorney General on MPSC's motion to commence a proceeding to implement specific recently enacted provisions of PA 169. He also supported the Attorney General with analysis and testimony in various power supply and gas cost

recovery cases. Issues included: prior year under-recovery of power supply costs, under-recovery of cumulative Pension Equalization Mechanism costs, over-refund of the companies' residual Self Implementation Refund, the companies' claimed credit to Power Supply Cost Recovery (PSCR) costs related to the credit claimed by an affiliate, regulatory asset recovery surcharges asset, and liability balance resulting in over recovery, Reduced Emissions Fuel (REF) prudency and calculation of REF impacts, generation dispatch and purchased power, purchased power agreements, emission control expenses including appropriateness of mercury filter expenses and coal refinement expenses, transfer price for renewable energy sources, replacement power costs, the inclusion of excess fuel and variable O&M expenses proffered by various intervenors, Karn1 outage delay and Rate E-1 discount recovery, and hedging on gas procurement.

Based on his experience and training, the Tribunal accepted Mr. McGarry as an expert in revenue requirements and rate-making for utilities.[110]

Mr. McGarry testified that his purpose is to explain the methodology with the source data used to develop the revenue requirement that DTE would have to collect to recoup its investment in Sigel. His report includes the following three charts:

A. A "Calculation of Total Revenue Requirements" for Lake Winds and Sigel for both 12/31/2015 and 12/31/20[16];

B. AE would like projections over the expected life of the projects which is 30 years (until 2042). Projections should be nominal (i.e.: including inflation[]);

C. AE will need to separate both: 1) "property taxes" from consolidated O&M expense for each year and, 2) "return on net rate base."

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[110] Tr. 4 at 653.

As with Lake Winds, this analysis also includes:

1. a breakout of the revenue requirement between Wind Turbine Plant and Utility Plant
2. a calculation of revenue requirement expressed in $ per MWh
3. a determination of amount of revenue collected via the approved Transfer Price and Cost to Achieve Compliance for Consumer's Renewable Energy Plan.[111]

Respondents requested from DTE a breakout for the revenue requirement calculation submitted in the Renewable Energy Plan reconciliation (case 18808), which contained the renewables' aggregate total. There was no breakout. Mr. McGarry utilized Consumers Energy for some specificity.

The total plant in service includes physical assets, turbines, blades, property buildings, and equipment. They are termed as assets in utility regulation. The total plant in service as well as additions through 2015. The depreciation or net plant was extracted from a depreciation case at MPSC. Mr. McGarry was not involved and is not a depreciation expert, but explained how a depreciation case is an analysis of the remaining life of the plant.

> [T]here's a curve that they generally look at in terms of how – you know, the very beginning the depreciation is – is low and then it – because the plant is brand new, and then it accelerates over the life of the - and they use average, you know, retirements in there to figure out how much retirement or how much depreciation should be applied at what point of life of the plant depending - or, the asset depending on how long the asset usually lasts. . . . [T]hey come up with . . . the rate to get to fully depreciate the asset over its useful life. And that rate is then applied to the remaining plant balance to arrive at a number that is added as depreciation expense to the accumulation depreciation as it's coming up such that the net plant balance is dropping as the life of the asset continues.[112]

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[111] Respondent's Exhibit 1 at 141-142.
[112] Tr. 4 at 660-661.

MPSC (and FERC) regulate DTE. It is one of eight investor-owned utilities, some

cooperatives are regulated, and 41 municipal electric utilities are not regulated but

provide information to MPSC. The cost of service rate-making was a power point

presentation from the commission's website. Mr. McGarry testified:

> The process starts with a determination by the utility that it needs to ask the commission for an increase in rates. They submit an application for an increase in rates, which starts the process. They then – intervenors will then get into the case, most notably staff, the attorney general's office and other common intervenors who will come year after year, ABATE, MCAA, MEC, all those different intervenors will throw their hat into the ring and analyze and offer an opinion to whether or not the company deserves or needs that much of a rate increase.
>
> It's now a ten-month process. It used to be an 11-month, by statute. A recent amendment to the public service law changed that from 11 to ten. And the – throughout that whole process there is testimony – there's pre-filed testimony from all the parties, and I would note that the company's application when it comes in has the company's pre-filed testimony right at the beginning of the case.[113]

When questioned on how the cost of service rate-making relates to Mr.

McGarry's calculation of the revenue requirement, he responded that it is crucial to

understand the process: (i) Revenue requirement, (ii) Cost of service (and allocation),

and (iii) Rate Design (service charge or flat monthly fee). Commercial and Industrial

properties have a demand component, how much infrastructure and capacity is needed

to meet their specific demand. The rates include both demand and energy plus service

charges.

The Renewable Energy Credit (PA 295) was discussed. DTE met Michigan's 300

MW requirement by December 31, 2013, and the 600 MW by December 31, 2015.

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[113] Tr. 4 at 663-664. Respondent's Exhibit 24.

Initially, the utility company could not own more than 50% of the capacity to meet the

300 MWh. However, that portion of PA 295 was repealed with no ownership limitation.

Mr. McGarry opined how costs for renewable energy would be recovered under

PA 295. The transfer price is collected through the transfer price or PSCR and the

incremental cost of compliance surcharge. Around 2008-2009 a surcharge was created

that went on customer's bills that created a pool of money for the incremental cost of

compliance, which was to credit the utility for the cost of facilities that they purchased

beyond the transfer price. If more money is required, then they go to the surcharge. The

pool of dollars fluctuates and may go down. Transfer price is the vehicle by which

revenues are collected from the customer.[114]

MPSC has to approve the purchase of the wind park and set the transfer price. If

the transfer price is insufficient, a subsequent hearing is set up to determine what has to

be collected as a surcharge. That amount shows up on utility bills ($2-$3).

The PSCR is a rate-making factor applied to customer bills to recover various power-

related extensions, fuel for generation, transmission costs, PPAs are some of the

reasons. It is the primary way the revenue for Sigel is recovered from DTE electric

customers. The transfer price is the rate-making vehicle used to recover revenues to

recover the renewable energy cost.

Mr. McGarry continued to explain terminology (related to utilities). *Securitization*,

a regulatory mechanism that allows a utility to recover costs for an issue or cost center

by issuing bonds, which are lower than the company's debt structure. They can be long

or short-term debt. *Stranded cost* is the value of a utility asset that can no longer

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[114] Tr. 4 at 677.

recover its cost or investment. Impairment describes the loss of an asset beyond the book value. Someone created a rate-base as a uniform system of accounts for the assets that a utility owns. FERC requires its use. Both the FERC and MPSC have similar annual reports.

Mr. McGarry's "Calculation of Total Revenue Requirements" utilized MPSC information from 2015 and 2016 cases for the revenue requirements (2013, 2015, 2016) and a breakdown of revenue requirements.[115] His second table expands the projections from 2017 to 2042 as requested by Appraisal Economics. His chart includes a plant in service, accumulated depreciation to result in the net plant. Pre-Tax WACC Rate, Return on Base Rate, O&M tax and leased land payments, Depreciation, Property Taxes, Insurance, Tax Incentive (PTC) equal the Projected Revenue Requirement. The MWh Generated (64), $/MWH Revenue Requirement ($75), Transfer Price as Approved ($69.55 -$64.58), Revenues Recovered via PSCR ($16,22-$15.69), Surcharge Revenues ($1.27-$2.51). His last line item allocates $1.05 to $1.07 to the Utility Plant, based on total projected revenue requirements ($17.48 to $18.20), allocation percentage that results in Wind Energy System PP ($16.43 to $17.13). When asked what would happen with a hypothetical seller, hypothetical PPA, attempting to establish a value of $77 million, what would or has to happen for sale to occur. If Sigel were to sell, would it require commission approval? "No, they would make an application to the commission, very similar. A docket would be created and they would make an application. They would submit their direct testimony, their pre-filed

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[115] Respondent's Exhibit 1 at 141-144. He also determined the revenue collected for the approved transfer price and cost of compliance for the Consumer's Energy renewable energy plan.

testimony in support of their position."[116] Mr. McGarry determined that the plant in

service is $142.52 million, with $15.43 million in accumulated depreciation, which

resulted in Mr. Kettell's calculation of the net plant value of $127.09 million. The

difference between the parties' contention is $50.9 million. Mr. McGarry opined it would

be a stranded cost. It could be written off against earnings or securitized. They could

sell bonds to pay for it, and the customers would pay the bonds over a period.

Securitization (for example) would sell bonds to pay for the $50 million, and the

customers would pay for the bonds over 10-30 years. The company must get it off their

books, as FERC does not allow a return on an asset any longer owned. This may give

the seller an advantage with the cost and interest of the bonds.

Mr. McGarry opined that Siegel would require MPSC approval for a sale citing

MCL 460.6q(1), which states that:

> A person shall not acquire, control, or merge, directly or indirectly, in whole
> or in part, with a jurisdictional regulated utility nor shall a jurisdictional
> regulated utility sell, assign, transfer, or encumber its assets to another
> person without first applying to and receiving the approval of the
> commission.

A discussion on "intergenerational equity among ratepayers" using an example of

a regulated ratepayer builds a power plant for $1million, with a life expectancy of 40-

years. In one year, the utility expenses pay for it, with later generations getting the

benefit. This is versus the rate base with the depreciation over the 40-year life

expectancy. The cost is equitably spread. Mr. McGarry noted that companies maintain

different sets of books, depreciation for rate-making as it is spread over more years,

while federal tax purposes allow quicker depreciation.

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[116] Tr. 4 at 685.

Mr. McGarry was asked if a regulated utility had a PPA for $45/MWh if that is the

price the ratepayer pays.

> Not the $45. They'll pay – it's the – you're missing the energy piece. Your total dollars – you got to look at it from a total dollar's perspective. They will actually be paying the $45 per megawatt hour, but when you - the difference becomes not because of the $45 but because of the energy usage. If they projected a million kilowatt hours and charged that $45, if they don't use – if the customers don't use a million kilowatt hours and only uses 750,000, then that pool of dollars – if the company is collecting at a million dollars, they owe them for the difference. Conversely, if they projected a million kilowatt hours and it's 1.2 million, the company's undershot it, now the customer owes. So, the $45 is not the determining factor. The $45 stays the same. It's the pool - it's the total – aggregate dollars in total.[117]

Mr. McGarry utilized Mr. Slater's testimony from the U-18802 rate case to

determine some of the figures given to Mr. Kettell for use in the DCF. However, Mr.

Slater's testimony describes that the accounting for renewable energy is different than

general rate-making accounting. Mr. McGarry states that Mr. Slater describes

construction work in progress (CWIP), working capital, and future use are all buried

within the numbers that he shows as the plant in service. The renewables have a

deduction for deferred income taxes out of rate-base before the WACC and before

applying pre-tax rate. Mr. Slater shows how DTE calculates the average rate base

before applying a pre-tax rate of return and accumulated deferred income taxes, which

are also deducted from the rate base before the pre-tax rate of return is used. When

asked, whether that is what he did in his report, Mr. McGarry responded, "No, I did not.

Now, one thing we would have to know how much is associated – the accumulated

deferred income tax is associated with Sigel."[118] Utilizing Respondents' Exhibit 4 at p

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[117] Tr. 4 at 722-723.
[118] Tr. 4 at 734.

697, Line 3 is the Plant in Service, and Line 9 is the accumulated deferred income

taxes, which indicates an 11% deduction. Mr. McGarry's revenue requirement did not

include a deduction for the effective deferred income associated with Sigel. Mr. McGarry

did not do that in his report for the use by Mr. Kettell.[119]

The Tribunal notes that the utilization of the information from Mr. McGarry's

charts was gone into great detail by Mr. Kettell in his income approaches.

Dennis Buda

Respondents presented testimony from Dr. Dennis Buda. Dr. Buda has a

bachelor's degree in engineering, an MBA, and a doctorate in business management.

Dr. Buda worked as an engineer for DTE (formerly Detroit Edison) at the St. Clair Power

Plant from 1982 to 1994. In 1994, he became project manager for DTE's unregulated

subsidiary, DTE Energy Services, out of Ann Arbor, doing Brownfield construction on a

temporary assignment. In 2005, Dr. Buda moved to DTE's fuel supply organization,

managing the railcar fleet. He was named supervisor of assets for Thumb Wind in July

2012, and in 2018, he was named manager of Thumb Wind Parks.

Dr. Buda confirmed that the net capacity factor for Sigel in 2018 was 44.6, which

is slightly higher than the neighboring parks. He testified that the turbines had concerns

with keeping their availability going. GE issues regarding the balance issues of the

turbines, blades, integrity, pitch motor integrity, gearbox concerns, batteries, control a

complete array. DTE also utilized GE wind turbines for its subsequent parks, Echo-

Pinnebog and Pine River. All the turbines are on a competitive bid basis.

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[119] Tr. 4 at 744; Mr. McGarry's calculated revenue requirement is too high as the rate base is overstated
by not deducting the deferred income taxes.

Dr. Buda did a general update presentation to the Huron County Planning

Commission in 2014. He explained terminology in the presentation and a look back at

2013. Sigel 35 is a specific wind turbine, which had a blade failure. The blade broke in

half, which was unusual. Lightning was the impetus, but "the root cause was attributed

to a manufacturing defect, and it was the improper heating of the carbon spur on that

blade that more or less provided a weak spot in that blade, and it failed there."[120] There

are also blade tip repairs identified as Sigel wind turbine 40 and McKinley wind turbine

five, which were lightning strikes. He explained "Tower Vibrations" as:

> What would happen on tower vibrations is the – you know, there is a limit, an alarm, a trip when the tower itself goes out of spec. And so that – that was one of the things that we resolved at the park, you know, with GE. And that was a controls type issue and a gearbox issue, where, you know, we had to go back up, re-torque, check the controls to keep the tower from vibrating. The tower will swing, and then if it swings off of alarm it will trip itself.[121]

It involved recalibrating the blades as part of it.

It is good engineering practice to check all of the turbines. The Pinch Motor

Gearbox Oil seals were the next issue on the presentation. He described it as:

> There's a pitch motor that goes through a gearbox. That's what turns the blade. Pitches articulates the blade. This is another fascinating one. The oil that was in the gearboxes was not compatible to the existing seal that was in there, so the oil essentially would eat the seal.

> And we went through an excessive array of testing at DTE labs in DTE and then found a compatible seal with that oil and then we went in and replaced the seals. A little bit better fit, compatible with the oil inside.[122]

> When asked to explain a generator slip ring, Dr. Buda testified:

> This is the – the actual rotor on the generator and we had issues with these slip rings, a couple of different issues. Overheating. There are brushes that

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[120] Tr. 5 at 894.
[121] Tr. 5 at 896.
[122] Tr. 5 at 897.

ride on these rings. They would take the brushes and fail them very quickly. And what we did there is we switched – we still are, in fact, switching the material for those slip rings to a bronze. . . . They run cooler and degrade the brushes.[123]

Dr. Buda tracks O&M and CAPEX by the wind park and Thumb. Duke Energy is responsible for O&M with day-to-day activities and 24/7 monitoring of the park's turbines. Their employees handle the repairs. DTE does the distribution operations, substation, and underground.

He projects CAPEX for five years. The budget was estimated at $11 million, with three Gearbox replacements included in the CAPEX budget. DTE has eight wind parks (Sigel, McKinley, Minden, Echo, Pinnebog, Brookfield, Gratiot, and Pine River).

GE supplies the turbines to the specs that DTE requires. Within the turbine, there are different manufacturers of OEM gearboxes (Winergy and Najing). Dr. Buda estimated approximately 90% of the gearboxes at Sigel, Minden, and McKinley are manufactured by Najing. GE estimates the life expectancy of a gear box is ten years. However, they have had severe wearing of gear teeth, bearing issues that fail. This is considered a metal fatigue issue. Dr. Buda testified that over and above the normal oil sampling, they "… put vibration monitoring on the drive train, so that helps us get a trend, an operational trend of the gearbox and then alarm limits, so we understand where a problem may be starting proactively, then we can attack that."[124]

Vibration is a result of fatigue in the gears. Dr. Buda did not specifically know how many gearboxes were replaced, rebuilt, or supplied by GE. Huron County has 213

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[123] Tr. 5 at 898.
[124] Tr. 5 at 922.

Wind towers, 40 of which are Sigel. Sigel had, between 2013 and 2017, twelve

gearboxes replaced, seven were new, and five were rebuilt by Revolution.

Upon cross-examination, the question was posed whether as the turbines age,

will their capacity factor go down? Dr. Buda opined that the capacity factor would

decrease as the turbines age. The actual expenditures for CAPEX for 2016-2019 were

higher due to more failures than anticipated, equaling more cost. He further opined that

the total CAPEX line is a reasonable projection of total CAPEX for Sigel as of

12/31/2016. When asked, "Is there any double-counting of gearboxes by combining the

normal CAPEX and the gearbox replacement line item? [he responded,] [n]o, I don't see

double-counting, sir. I'm looking at the total CAPEX number."[125]

Dr. Buda believes that 2018 was probably the best year for Sigel. The addition of

monitoring technologies made improvements that assisted the operating condition of the

turbines fleet-wide. It helps to monitor and balance the workload.

Dr. Buda estimated the cost of the Revolution gearbox rebuild was around

$283,000 and Nanjing around $300,000, not including the cost to install them. The

installation does not include the price for crane, crew, or crane pad, required to do a

complete replacement is around $490,000.

Joseph Kettell

Respondents presented testimony from its appraiser, Joseph Kettell. Mr. Kettell

is managing director of Appraisal Economics, Inc. in Paramus, New Jersey, which he

formed in 1990 with his partner, Keith Reams. He has an undergraduate degree in

chemistry, a master's in chemical engineering, and an MBA in finance. Mr. Kettell has

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[125] Tr. 5 at 957.

two appraisal designations from the American Society of Appraisers; he is a senior appraiser of business valuation and a machinery and equipment certified appraiser. He has been doing business valuation and machinery and equipment appraisals for thirty-five years. Mr. Kettell began his career as a chemical engineer at Combustion Engineering (CE) Lummus, a design and consulting firm of worldwide petrochemical, environmental, and energy units. In that role, he was responsible for the conceptual and detailed design of petrochemical facilities, power plants, cogeneration systems that supported petrochemical facilities and environmental systems. After CE Lummus, Mr. Kettell obtained a position at Arthur D. Little Valuation, an international research and consulting firm. He worked for Arthur D. Little Valuation for five years performing business valuations and intangible and tangible asset appraisals. After Arthur D. Little Valuation, Mr. Kettell moved to Pricewaterhouse, where he worked for under a year before leaving to form Appraisal Economics.

Mr. Kettell has had numerous speaking engagements on general business valuation, intangible assets, power plants, and renewable facilities over the years. He has spoken at conferences for the ITT, IAAO, ASA, Appraisal Institute, and IRS. Mr. Kettell was a contributing author for the 2004 Institute of Professionals in Taxation textbook, drafting a chapter on the valuation of power plants. He also authored an article on how to value government incentives for wind parks, featured as the cover story for the August Edition of the IAAO Journal Fair & Equitable three years ago. Mr. Kettell has worked on various alternative energy projects, including hydro facilities, cogeneration plants, geothermal facilities, municipal waste treatment facilities, and solar power facilities. He has appraised nearly 100 power plants and numerous wind parks,

including Michigan Wind I, Michigan Wind II, and Tuscola Bay. Representative clients include GE Capital, the U.S. Department of Justice, the IRS, and state and local agencies. Mr. Kettell has testified in eight different states on various federal, property tax, and shareholder disputes.

Based on his experience and training, the Tribunal accepted Mr. Kettell as an expert in valuation.

Mr. Kettell prepared and communicated an appraisal of the subject property. He was assisted by Sung Kim and Dominic Longo, Alkesh Desai, and Mr. McGarry provided the cash flow projections for the regulated facility. He inspected the subject property in December 2017 with Dr. Buda and he walked around the wind towers and the turbines. Two critical issues Mr. Kettell remembered in testimony was that the wind is very good and blows 24/7 from six to eight meters per second. The second issue considers "PTC and ITC, that PTC on a regulated basis gets passed on to customers and that ITC benefits the – the entity, the company."[126]

Mr. Kettell utilized FERC filings, Department of Energy publications (DOE, NREL, and EIA), and other publications, Renewable Technology Reports, North America Wind Power, as well as databases for financials including Capital IQ, Moody's, Bloomberg, Marshall & Swift, Duff & Phelps textbooks, ASA's M and E, and Cost of Capital textbooks, MPSC, and DTE. Because DTE does not separately operate Sigel, the revenue data is for the three facilities in Thumb Wind Park. Mr. McGarry made the allocations.

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[126] Tr. 5 at 984.

Mr. Kettell valued the subject at $121,599,942 as of December 31, 2015, and

$113,099,742 as of December 31, 2016. The TCV on the combined assessment rolls

was $113,600,000 as of December 31, 2015, and $109,406,000 as of December 31,

2016.

> Our determination of the true cash value of Sigel Wind Park reflects its financial benefit on PA 295[127]. Assuming that DTE Energy would sell for a lower amount would require a forced sale of the wind park and create unrecoverable 'stranded costs' on the company's balance sheet. A forced sale does not fall under the definition of True Cash Value and is not the appropriate premise of value in a valuation disclosure.[128]

Stranded cost is a regulatory concept for regulated companies and has a net

plant in service that is more than the sale price. "The difference between net plant in

service and its lower sale price is called a stranded cost."[129]

Mr. Kettell considered the subject property to be a special-purpose wind farm

property as it is of limited use and operates as a wind park. There is a market for wind

parks, causing economic obsolescence in coal and nuclear facilities and conventional

power plants. Mr. Kettell testified that the current wind supply was estimated to be

approximately 10% currently versus only 1% of the supply of electricity in 2009-2010.

He discussed that DTE selected the PTC based on electricity production and is

approximately two and one-half cents per kWh. The ITC is approximately 30% of the

installed cost. The subject's location is in a good wind area to generate a lot of

electricity, so the PTC is advantageous.

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[127] PA 295.
[128] Tr. 5 at 990.
[129] *Id.*

Mr. Kettell relied upon *TES Filer City Station v Township of Filer*, as he interpreted it as a highest and best use case. It was a co-generation plant built under PURPA, which Mr. Kettell testified that PA 295 was similar, as the PURPA allowed the facilities to guarantee a rate of return on their investment through their PPA. "I saw a parallel here as to the subject being operated under PA 295 and should continue to operate under PA 295, because in my opinion that maximized its value. . . . the judge's conclusion [in *TES Filer*] was that the subject had to continue to operate as it was operating on the effective date, as a PPA facility."[130]

Renewable energy is growing and becoming more cost-effective to construct; wind is $2,000/kWh with solar decreasing from $4,000 to $2,000, but it is about 50% as efficient as wind.

Mr. Kettell considered the sales comparison approach; however, obtaining sufficient sales for adjustments is complex with specialty properties. Twenty-one transactions between 2012 and 2016. Sale- 21 was Pheasant Run Wind II. DTE Energy purchased it in 2014, operates in the Thumb. It was under an Option Agreement on April 13, 2013. The sale price of $157,100,000 is $2.094 million per MW. It has a capacity of 75 MW, has 44 GE 1.6 MW turbines. It has a PTC federal incentive. (DTE had a PPA with the seller. After the purchase of Pheasant Run II, it was renamed, Brookfield Wind Park and it will also be subject to the provisions of PA 295, as a public utility company.

As to the subject property, 64 MW (Sigel's capacity) multiplied by $2,094,400 (unit slae price) totals $131,041,400. Mr. Kettell deducts 8% working capital or

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[130] Tr. 5 at 1002.

$10,723,328 to result in $123,300,000 indication of value. Brookfield's $2,100 kW sale

at was compared with Petitioner's $77 million at $1,203 per kW and Respondents'

$121.6 million at $1,900 per kW.[131] However, he gave the sales comparison approach

no weight.

Mr. Kettell described the income approach as a projection of income, discounted

to a present value, in both a direct capitalization approach where one year's worth of

income is capitalized, as well as a detailed DCF. The resulting numbers are close.

PA 295 provides cost recovery mechanisms for Sigel "which allows recovery of

the cost of investing in renewable energy projects and "incremental costs of

compliance," including authorized rates of return on investment. "This provision allows

Sigel Wind Park to recover the full cost of investing in renewable projects and return on

investment."[132] Mr. Kettell's TCV under the income approach assumes that Sigel would

be sold with similar financial results under a PA 295.

Direct capitalization is one year's income divided by the market capitalization

rate. The discount cash flow shows the variability of the annual cash flow over the wind

park's useful life. The historical operating date from 2013 to 2016 averaged 242,055

MWh, and the average capacity was 43.2%.[133] MJM provided the following data:[134]

Note all projections are in thousands.

	2013	2015	2016
Plant in Service	$135,513	$142,520	$144,237
Accumulated Depreciation	-$5,136	-$15,427	-$20,806
Net plant in service	$130,377	$127,093	$124,431
Pretax rate of WACC	11.65%	11.63%	11.63%

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[131] Respondent's Exhibit 88.
[132] Respondent's Exhibit 1 at 39.
[133] *Id.*
[134] Note MJM did not provide data for 2014.

Return on rate base	$15,189	$14,781	$14,355
Depreciation	$5,136	$5,357	$5,379
O&M	$2,514	$3,581	$4,119
PTC	-$5,358	-$5,737	-$5,651
Total Projected Revenue Requirement	$17,481	$17,892	$18,202

O&M includes property tax, easements payment, and insurance. The earnings before interest, taxes, depreciation, and amortization (EBITDA) and the earnings before interest, taxes (EBIT) are calculated. A compound annual growth rate for EBITDA and EBIT are 2.0% and 4.0%. This calculation follows:

	2013	2015	2016
O&M	$2,514	$3,581	$4,119
EBITDA	$14,967	$14,401	$14,083
Depreciation	$5,136	$5,357	$5,379
EBIT	$9,831	$9,044	$8,704

Direct Capitalization: 2015 Assessment Date	
Avg EBITA over Remaining Life	$13,520
EBITDA minus CAPEX	$1,534
Deduct Avg CAPEX / REL	$11,985
Cap Rate	11.6%
Capitalized Value	$103,322
Plus PTC Benefit	$29,777
Minus Working Capital	$1,456
Minus Decommissioning Cost	$8,696
TCV	$122,900

The direct capitalization method estimates a value of $122,900,000, as of December 31, 2014.

Mr. Kettell also prepared a DCF for Sigel. The cash flow inputs include projection period, projected revenue requirement, O&M expenses, capital expenditures, depreciation, income taxes, net working capital, PTC, and discount rate. The useful life

is estimated at 30 years, as of 2015, resulting in 27 years remaining (REL). The DCF

was calculated out for 27 years.

The discount rate is related to the rate of return investors require for investment

and the risk. The two factors considered were the investor's expected rate of return for

risk-free investments and the risk of future cash flows. US government securities were

presumed to have no risk of default for consideration of risk-free. The WACC was used

to calculate the cost of debt and equity.

Mr. Kettell described the eleven guideline companies for the discount rate that

may be potential buyers. The business descriptions and financials utilizing the

companies' 10-Ks were selected to be the most like subject and potential buyers. The

same eleven companies were used in both the CAPM model, the dividend growth

model for the cost of equity, and the Betas (comparing Value Line and Bloomberg

Method). They include CMS Energy Corporation, DTE Electric Company, ALLETE, Inc.,

Alliant Energy Corporation, Ameren Corporation, CenterPoint Energy, Inc.,

Consolidated Edison, Inc., PG&E Corporation, Public Service Enterprise Group, Inc.,

Unitel Corporation, and WEC Energy Group, Inc.[135]

Again, project revenue was by MJM Consulting. Income is calculated by

multiplying the WACC by Net Plant in Service for the return on net investment. Annual

expenses (operation, maintenance, and depreciation) are passed through to the

ratepayers and added to the return on net investment. PTC is an annual credit on

operating expenses and benefits the ratepayers.

Revenue projections are:

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[135] Respondent's Exhibit 1 at 50.

Year Ending December 31	2016	2017	2018	2019	2020
Projected Revenue Requirement	$18,202	$16,949	$16,711	$16,330	$15,943

O&M excluded non-cash charges of depreciation and amortization. Property taxes were deducted as they are incorporated in the discount rate.

O&M Projections	2016	2017	2018	2019	2020
O&M Expenses	$4,119	$2,930	$3,242	$3,284	$3,327
Property Taxes	-$1,135	-$1,135	-$1,135	-$1,135	-$1,135
Net O&M Expenses	$2,984	$1,995	$2,107	$2,149	$2,192

The O&M expenses were compared with the NREL in *2015 Cost of Wind Energy Review*. The O&M was estimated at $51,000 per MW and adjusted for inflation minus property taxes.

NREL-Adjusted O&M Projections	2016	2017	2018	2019	2020
O&M Expenses	$2,202	$2,278	$2,354	$2,433	$2,513

CAPEX projections are associated with equipment acquisition, improvements, and major maintenance of long-term assets. The cost includes both routine upkeep involving turbine maintenance and replacements and maintenance for environmental regulations.

CAPEX Projections	2016	2017	2018	2019	2020
CAPEX	$2,015	$2,828	$1,463	$1,463	$1,463

Depreciation also from M&M Consulting is as follows:

Depreciation Projections	2016	2017	2018	2019	2020
Depreciation	$5,379	$5,444	$5,525	$5,581	$5,636

Income taxes were calculated on a federal tax rate of 35%, state tax of 6% for C Corporations.

Net working capital utilized five years of financial data of the guideline companies exposed to the regulated utility business. The average net working capital is 8% of revenue. This level is applied in the analysis and deducted from the DCF result. The guideline company networking capital levels are:

Guideline Company	5-Year Average
CMS Energy Corp	15.8%
DTE, Energy Company	10.7%
ALLETE, Inc	1.7%
Alliant Energy Corp	4.5%
Ameren Corp	8.9%
CenterPoint Energy, Inc	1.0%
Consolidated Edison, Inc	3.8%
PG&E Corp	3.3%
Public Service Enterprise	8.8%
Unitil Corp	11.2%
WEC Energy Group, Inc	15.0%
Average	7.7%

The PTC incentive was 2.3 cents per kWh in 2014 and 2.4 cents per kWh for 2016 and forward. The subject has, as of the relevant tax dates, 7 and 6 years remaining. The appropriate equity and debt rate considered the cost of flotation. The property tax adjustment results in the after-tax discount rate after determining the WACC and concludes to an 8.5% discount rate.

Mr. Kettell adjusted the DCF for the working capital of $1.46 million or 8%, as it is non-assessable for property taxes. A decommissioning cost estimate of $8.7 million is subtracted, based on DTE Energy's Sargent & Lundy LLC as of August 2016. The "wind park site decommissioning cost" for Siegel Wind Park is $8,695,549. The resulting TCV from the DCF method is $123,200,000 as of the 2015 assessment date and direct

capitalization method estimates the TCV at $122,900,000. Respondents selected the

DCF method as the final value.

Mr. Kettell testified that Mr. Reilly "assumed in his appraisal a significantly lower

revenue and earnings as of the effective date than what was actually occurring as of

that date. And in my opinion, that's – that's the reason we have that requirement to state

hypothetical conditions for that purpose."[136] He indicated that Mr. Reilly's client was

DTE, and information on the Pheasant Run II sale should have been available to him.

Mr. Reilly's use of the PPA of Apple Blossom Farm at $43 violates the principle

of substitution, which requires the facility to be identical to the subject, and Apple

Blossom was not constructed on the effective date, so it was a poor comparison. The

list of the six wind farms that Mr. Reilly listed for the PPA and LCOE. The first date that

electricity was produced ranged from December 2013 to December 2016.

Mr. Kettell disagrees with the use of the ITC as a deduction from the

$123,968,000 RCN. The government does not allow you to depreciate the entire value

of the PTC. They only allow you to depreciate 50%, "so that equates to multiplying the

123 million 968 by .85, and that becomes your basis for the 50 percent bonus

depreciation."[137] That would wipe out his economic obsolescence. Investors are still

building wind parks with the intent of getting their expected rate of return. They are not

going to build wind parks and only get back $0.60-0.70 on the dollar. Mr. Kettell opined

that there is no economic obsolescence. If Mr. Reilly had used a PPA a dollar or two

higher than $43, it would have reduced his economic obsolescence.

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[136] Tr. 6 at 1,083-1,084.
[137] Tr. 6 at 1,098.

Mr. Kettell also disagreed with Petitioner's use of the ITC in the Revenue

Shortfall Analysis to determine obsolescence. The subject is a PTC facility that

produces a contribution of earnings to this facility. The most significant mistake in Mr.

Reilly's operating income in line 18, and the operating income is negative generated

from depreciation and amortization.[138]

> He's using the wrong depreciation for a brand new state-of-the art facility,
> which is his model for his economic obsolescence. That's what we're
> looking at. This is his economic/functional obsolescence shortfall return
> analysis. So this is separated from the subject property. We're looking at a
> separate state-of-the art facility that would be constructed and would obtain
> accelerated depreciation, including 50 percent bonus depreciation in the
> first year.
>
> That's a very, very significant incentive similar to a production tax credit
> incentive. He includes a production tax credit incentive but he does not
> include this tax shelter for accelerated depreciation.
>
> The next line, 19, income taxes, as you can see he has zeroed out for the
> first five years. That should be a significant negative number, and that's
> called a tax shelter.[139]

The differences in CAPM were the next area of discussion. The risk premium Mr.

Reilly used 7.0% based on a historical growth rate versus his 5.5%. Mr. Kettell has not

found any support for a historical growth rate for forecasting the equity risk premium.

The small stock premium reflects the risk and liquidity that small companies have

compared to larger diversified companies. Mr. Reilly uses the 10th decile and Mr. Kettell

uses a blend of the 9th and 10th decile. Mr. Kettell used a multi-stage dividend growth

model; Mr. Reilly used a buildup method in the machinery and equipment handbook.

His buildup method is higher than the CAPM because his capital asset pricing method is

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[138] Petitioner's Exhibit 1 at 74.
[139] Tr. 6 at 1,096-1,097.

adjusted for the lower industry risk in utility properties but didn't adjust in his buildup method. The use of corporate bonds instead of corporate utility bonds would have adjusted for the utility industry.

The two appraisers also differ in the WACC before a property tax adder. Mr. Reilly's WACC is 9.4% for 2016 and 9.2% for 2017. Mr. Kettell's WACCs are 7.77% and 7.7%. NREL is 8.3% and 7.55%; however, the data was considered but not utilized by Mr. Kettell. It is WACC for the industry, not the risk of recovering cash flows for a single wind park. [140]

Respondents reverse engineered Mr. Reilly's income approach, using Respondents' 8.5% discount rate implies a PPA price of $59 that leads to a conclusion of $120,000,000, very close to Respondents' determination.[141] He also recreated Petitioner's Return Shortfall Analysis (for the Economic Functional Obsolescence). Mr. Kettell determined that a wind farm would need a capacity factor of 55.9% or is economically obsolete. Wind parks are built with lower capacity factors. Mr. Kettell opined that DTE would have no interest in selling the subject for less than its net book value or net plant in service.

Petitioner questioned Mr. Kettell on the result of including Pheasant Run or Pheasant Run II at $49.25 to Cross Wind's $59 LCOE and Big Turtle's PPA ($56). He did not because they are older facilities relative to the effective date. He was not able to find that construction costs have decreased from 2013 to 2015. He remembered that some facilities were installed in 2014 for $2,200 per MW.[142] Mr. Kettell believes that Mr.

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[140] Petitioner objected to the admission of Respondent's Exhibit 17 and Respondent's Exhibit 18; they were admitted, however, neither appraiser utilized it in the calculation of WACC.
[141] Respondent's exhibit 86.
[142] Tr. 6 at 1,152.

Reilly's use of LCOEs and PPAs to determine the market price for electricity for wind

parks an appropriate methodology; however, his PPA rate should be higher. Regulatory

depreciation is based on service life and physical, but not economic or functional

obsolescence. When questioned if an income approach for Michigan property tax

purposes must be based upon market income. He responded, "Assuming the market

price is the price of – spot price of electricity, I believe the facility could sell at a different

price than that, depending upon his PPA."[143] Mr. Reilly's response did not answer the

question and when asked again, he responded, "I don't know the answer to that."[144]

When questioned if he provided valuation tables to be used by township officials

associated with or members of a group called Michigan Renewable Energy

Collaborative (MREC), Mr. Kettell answered, "I have." Mr. Kettell testified that he

provided valuation tables to Clark Hill and believes that they represent MREC. It is his

understanding that it is a group of townships that are involved with property taxes. He is

not aware of the assessors that use his tables. He thought maybe four years ago or so,

he provided a mass appraisal guide for the valuation of wind park property. He used the

cost and replacement costs data from government filings, considering functional and

economic obsolescence. He did not do an analysis on the base rates done for the

tables. He is not aware of whether or not a specific township is utilizing his mass

appraisal guide, nor if the values from his appraisal are higher than the values from the

tables.

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[143] Tr. 6 at 1,156.
[144] *Id.*

Mr. Kettell relied on the subject's rate base, not a market income as of the tax date, not on supply and demand reflecting market conditions for an existing wind park as of tax date, and not based on construction costs as of tax date. It is based on 2011-2012 construction after depreciation. He agreed that the planning and purchasing could have been three years prior. Those costs would have been capitalized in the rate base for Sigel.

DTE's income can earn under Michigan rate bases for utilities could be different from market income as of tax dates. Rate regulation is based on historical costs less accumulated depreciation. Mr. McGarry's information was relied upon by Mr. Kettell for revenue projections and CAPEX. "U-18232" MPSC contains the rounded amounts that feed into his DCF. The entire revenue projections are based on DTE's rate base as approved by the MPSC. The actual level of expense is irrelevant because the expense projection goes into the revenue requirement, and the same expense is taken out as an expense. It has no net effect on Mr. Kettell's value conclusion. However, Mr. Kettell agreed that if a nonutility owned Sigel, the projected income would appear different.

Petitioner questioned Mr. Kettell on Mr. McGarry's use of 11.63% as MPSC's pre-tax WACC as it is applied to DTE's rate base. "Accumulated Deferred Income Taxes" indicates that the rate base that DTE has for its renewable energy is reduced by accumulated deferred income taxes in the amount of $114,495,000 or approximately 11% of the net plant. Mr. McGarry was not sure that MPSC allowed it as a reduction.[145] When asked;

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[145] Respondent's Exhibit 4 at 697.

Q. And did he explain to you that it would make no sense to claim that the 11.63 percent should be used if it didn't – if it wasn't being applied to a net plant that was being reduced for accumulated deferred income taxes?
A. No, we agreed that it does make sense for me to use the information as I did.
Q. Okay. So you are standing by using 11.63 percent to be applied to your net plant to derive your revenue requirement in your discounted cash flow, even though you see this deduction for accumulated deferred income taxes of about 11 percent net plant?
A. Correct.[146]

Mr. Kettell agreed that utilities, as long as the utility elected for accumulated deferred income taxes (ADIT) depreciation for tax purposes, the use of slower depreciation for rate-making purposes reflects the service life of the assets and slower depreciation (MACRS schedule) than federal depreciation. This allows the customers to benefit as cost-free capital.

Utilities tend to use slower depreciation for rate-making purposes. It is designed to reflect asset service, the service life of its assets, and slower depreciation than federal depreciation.

Petitioner questioned Mr. Kettell:

Q. And when we get back to why rate base would be reduced by those, one of the rationales from the regulators is that the utilities by obtaining faster depreciation on the income tax books, so to speak, are reducing their income taxes and that gives them basically cost-free capital; right?
A. Correct, that they want to pass on to their consumers.
    Their customers.
Q. And one way the regulators allow that is that the accumulated deferred federal income taxes are removed from rate base or rate based is reduced by accumulated deferred federal income taxes?
A. Correct, which is what Mr. McGarry did not do.[147]

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[146] Tr 6 at 1,183.
[147] Tr. 6 at 1,185-1,186.

Mr. Kettell explained that if the buyer chose to receive the benefit in his analysis of the accelerated depreciation. My analysis has excluded the benefit of accelerated depreciation by using straight line. I'm very aware of ADIT. It's something that comes up almost continuously in valuation."[148]

Mr. Kettell also prepared an appraisal for Lake Winds Appraisal (Consumer's Energy appraisal completed simultaneously as subject), again with Mr. McGarry's revenue projections. However, the pre-tax weighted cost of capital of 9.615%. Mr. Kettell was aware that Mr. McGarry's WACC was applied for a rate base without a deferred federal income tax deduction, and Mr. Kettell excluded the benefit of ADIT in his valuation but explained that he accounted for it by using straight-line depreciation.[149]

Mr. Kettell responded, "Flotation Cost." when asked other than a size adjustment, any other adjustments made for an investment in a rate-regulated utility and an investment in Sigel. "It relates to liquidity risk and we increased not only for size but size was also related to risk. We increase the discount rate to account for taking the Sigel Wind Park public, which would lower the overall risk. . . . Because it's – it's easier to sell stock within Sigel than to attempt to get a buyer to buy the whole facility."[150] When questioned if his value encompassed Sigel operating as an independent, separate rate-regulated utility, apart from Detroit Edison and Consumers Energy, Mr. Kettell answered, yes, "as a separate stand-alone entity, "[t]hat's a possibility, yes."[151]

> The revenue projection that we assumed is based on DTE's revenue, based on its rate base, and we're assuming that the buyer would get similar revenue but use the – a market-based discount rate and check the

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[148] Tr. 6 at 1,188-1,189.
[149] Tr. 6 at 1,206
[150] Tr. 6 at 1,212-1,213.
[151] Tr. 6 at 1,214.

operating and maintenance expenses to make sure that they were market-based also.[152]

Mr. Kettell used the 3.58% (A) size premium for the lack of diversity and liquidity in his dividend growth model. His dividend and growth rates are combined to determine the investor's expected equity. The multi-stages include (B) the midpoint of (A and C) Value-line (C) annual growth of 2% over a 30-year holding period. The cost of equity is 10.6%. This model assumed more growth in the near term than in the long-term, and the discount rate gets applied to the discount longer-term cash flows.

The direct capitalization analysis is not dissimilar to what real property appraisers may utilize. Petitioner disagrees, indicating that it does not come from the market, and adjustments were made for income taxes, depreciation tax benefit, CAPEX, and a 30-year life. Mr. Kettell agreed that he relied on Mr. McGarry's revenue projection and took an average of the normalized earnings before interest, tax, and depreciation. CAPEX are subtracted and applied an after-tax cap rate of 11.6% for the riskier investment. The revenue numbers were averaged, and CAPEX was averaged all from the DCF. The result was close to the DCF result.

Respondents' RCN utilized the cost per MW in 2014. The construction costs of wind parks decreased in 2008, increased between 2008 to 2010, and declined to $1.6 million per kW in 2016. Michigan has higher capital costs than national averages. Mr. Kettell averaged the cost from MPSC Form P-521 filings utilizing the costs of Echo, Brookfield, and CrossWinds for approximately $2.2 million per MW. He also consulted EIA, DOE and NREL for Michigan and Great Lakes costs. The wind park construction

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[152] Tr. 6 at 1,215.

cost for 2015 is $2 million per MW and for 2016 it is $1.9 million; at 64 MWs, this results

in a RCN of $128,000,000 and $121,600,000. Depreciation for the subject is 3.71% per

year with a life expectancy of 25.5 years, according to the MPSC.

Mr. Kettell explained that the construction is approximately three years for a wind

park. He did not consider the costs to construct as of the tax dates at issue but the cost

to build when the projects were complete with most of the cost in year two. Projects that

were not constructed before the assessment date, were not considered. He found

comparable properties were up and running. The estimated construction costs are not

for projects that are not constructed or not generating any income as of the tax date.

"You can make $30 million over the three years from Sigel that you wouldn't make on

Pine River."[153] Since Pine River was not constructed as of the tax dates at issue, it did

not matter to Respondents if MPSC approved costs less than $2,000 per MW.

Data from EOE and NREL are overnight costs that do not include interest during

construction. The three MPSC costs for the three new wind parks are inclusive of all

costs. They are not overnight costs as of either tax day at issue.

Mr. Kettell agrees that the construction of wind parks would be cost-prohibitive

without tax incentives. A potential purchaser of Sigel could instead choose to build a

replacement park. If that were their decision, they would get full benefits of the

incentives. However, the PTC is received over a ten-year period. The ITC provided for

approximately 30% of the qualified cost for a wind park. Regardless of the incentive,

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[153] Tr. 7 at 1,250.

reducing the cost, "The construction cost is the full cost including the tax benefits, and

that's what gets booked."[154] The ITC is considered a financing tool.

Respondents used the income shortfall technique to conclude no economic

obsolescence deduction is applied. This is based on the direct cap rate based on

DTE's rate base for the DCF. The functional obsolescence calculation compared the

subject property to the vintage capacity factors for the wind parks built during the tax

years at issue.

Pheasant Run Wind II was sold to DTE and renamed Brookfield Wind Park, and

the property does meet the highest and best use standard as PA 295 dictates its

operation. However, the Option Agreement was executed in April 2013 and the

Purchase and Sale Agreement was dated May 30, 2014. After the sale, it was subject to

PA 295, which controls the operation. The 74.8 MW capacity sold for $134,041,600.[155]

Deductions were made for the working capital to result in an indicated $123,300,000

indication of value for Sigel. Only one sale does not bode well for the sales comparison

approach as an indicator of value for the subject property.

Mr. Kettell was asked in redirect if the buyer of Sigel would operate as a stand-

alone facility and that a buyer would pay no more for Sigel than the amount it would cost

to build a replacement facility less than 30% of the construction cost due to the ITC. Mr.

Kettell stated that this was not used until year six, "[i]n addition to the accelerated

depreciation for the remainder of the plant, which could not be utilized until it had

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[154] Tr. 7 at 1,274.
[155] Petitioner's Exhibit 1 at 36 states 74.8 MW.

positive cash flow, positive earnings."[156] He opined that the ITC is not worth anything close to $30-$40 million in this instance.

Mr. Kettell did rely on costs for properties that were constructed as of the assessment date. The subject went into service on December 12, 2012. He used the actual cost for three facilities with overnight costs and EIA, NREL, and DOE, which did not include overnight costs. This resulted in him blending the costs. Mr. Reilly used only government numbers; therefore, his cost should be adjusted upward by 5% to 10% for lack of overnight costs.

Mr. Kettell testified regarding Petitioner's Exhibit 1, page 42, titled Michigan Wind Farm PPA and LCOE Summary. He stated that "the trend is generally up, although the cost for the third and fourth facility are showing some downward trend,"[157] despite Mr. Kettell stating that the trend is up in this exhibit.[158]

Mr. Kettell explained a valid replacement property for Sigel would take the PTC instead of the ITC. "The developer of a wind park would determine whether to select the ITC as opposed to the PTC, based on the net benefits from those tax deductions. And for a facility like Sigel Wind Park that has good wind that provides a better than average capacity factor, more electricity generated on average tend to select the production tax credit as it provides additional incentive . . . over the investment tax credit."[159]

Respondents rebutted Mr. Reilly's sensitivity chart utilizing a chart that shows the sensitivity of value based on inputs. The left side indicates PPA prices, and the top is a

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[156] Tr. 7 at 1,303.
[157] Tr. 7 at 1,204.
[158] Petitioner's Exhibit 1 at 42.
[159] Tr. 7 at 1,310.

different WACC. The remainder is identical to Mr. Reilly's income approach model.[160]

The present value of the accelerated depreciation benefit ($15 million) could be added

to each cell.

Mr. Kettell was questioned on recross on his definition of forced sale; Mr. Reilly's

value was less than the net plant in service of Sigel and was considered a forced sale

because the subject is a regulated entity. Mr. Kettell responded on redirect that a wind

park operating under PA 295 means that it is a rate-regulated entity. It is not an IPP.

The market that he considered is a similar rate-regulated utility. The submarket is IPP

under PPA agreements and merchant plants that sell power into MISO. Mr. Kettell

opined that an unregulated utility would not pay DTE's rate base to purchase Sigel. DTE

would not sell for less than its rate base, as it would be a forced sale. DTE would not be

a willing seller in that instance.

The benefit of an ITC was not relevant to this case because the best benefit is

the PTC for the subject. The owner receives a tax credit of 30% of the development cost

of Sigel. The tax credit assumes that the owner has an income tax liability that can be

offset by the income tax credit.

Mr. Kettell reiterated that he assumed the hypothetical seller would be a

regulated utility and market-based return rate. Mr. McGarry's operating and

maintenance were incorporated in the revenue requirement, and the same take out as

an expense, as this is reasonable for every business valuation. If earnings are positive,

all of the expenses are covered by the revenue, so that is what he did.

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[160] Respondent's Exhibit 86.

Respondent's indication of TCV for December 31, 2015, for the 2016 tax year, is

$121,600,000 and as of December 31, 2016, for the 2017 tax year, is $113,100,000.

FINDINGS OF FACT

The Tribunal's Findings of Fact concern only evidence and inferences found to

be significantly relevant to the legal issues involved; the Tribunal has not addressed

every piece of evidence or every inference that might lead to conflicting conclusion and

has rejected evidence contrary to those findings.

1. The subject properties consist of 40 GE 1.6 MW wind turbine assemblies with a

    total net operating capacity of 64 MWs.

2. Hub heights of the wind turbines are 80-100 meters (263.467 to 328.084 feet) and

    the blade length is 48.7 meters tall (159.7769 feet).

3. Sigel Wind Park is located on 8,600 acres.

4. Sigel began commercial operations on December 21, 2012.

5. The subject properties are located in Huron County.

6. The subject properties are part of the Sigel Wind Park.

7. Twenty- four wind turbines are located in Sigel Township and sixteen wind

    turbines are located in Bloomfield Township. As follows:

Township	Parcel Number	2016 TCV per Board of Review
Bloomfield	3202-900-101-00	$2,854,060
Bloomfield	3202-900-102-00	$2,617,435
Bloomfield	3202-900-103-00	$2,617,435
Bloomfield	3202-900-104-00	$2,617,435
Bloomfield	3202-900-105-00	$2,617,435
Bloomfield	3202-900-106-00	$2,617,435
Bloomfield	3202-900-107-00	$2,617,435

Township	Parcel Number	2016 TCV per Board of Review
Sigel	3226-900-118-00	$2,617,435
Sigel	3226-900-119-00	$2,617,435
Sigel	3226-900-120-00	$2,617,435
Sigel	3226-900-121-00	$2,617,435
Sigel	3226-900-122-00	$2,617,435
Sigel	3226-900-123-00	$2,617,435
Sigel	3226-900-124-00	$2,617,435

Bloomfield	3202-900-108-00	$2,617,435
Bloomfield	3202-900-109-00	$2,617,435
Bloomfield	3202-900-111-00	$2,617,435
Bloomfield	3202-900-112-00	$2,617,435
Bloomfield	3202-900-113-00	$2,782,928
Bloomfield	3202-900-114-00	$2,617,435
Bloomfield	3202-900-115-00	$2,617,435
Bloomfield	3202-900-116-00	$2,617,435
Bloomfield	3202-900-117-00	$2,617,435
Total	2016	$42,281,078

Sigel	3226-900-125-00	$2,617,435
Sigel	3226-900-126-00	$2,617,435
Sigel	3226-900-127-00	$2,617,435
Sigel	3226-900-128-00	$2,617,435
Sigel	3226-900-129-00	$2,617,435
Sigel	3226-900-130-00	$2,617,435
Sigel	3226-900-131-00	$2,617,435
Sigel	3226-900-132-00	$2,617,435
Sigel	3226-900-133-00	$2,617,435
Sigel	3226-900-134-00	$2,614,471
Sigel	3226-900-135-00	$2,614,471
Sigel	3226-900-136-00	$2,614,471
Sigel	3226-900-137-00	$2,614,471
Sigel	3226-900-138-00	$2,614,471
Sigel	3226-900-139-00	$2,614,471
Sigel	3226-900-140-00	$2,614,471
Sigel	3226-900-141-00	$2,614,471
Total	2016	$62,794,728

Township	Parcel Number	2017 TCV per Board of Review
Bloomfield	3202-900-101-00	$2,504,846
Bloomfield	3202-900-102-00	$2,504,846
Bloomfield	3202-900-103-00	$2,504,846
Bloomfield	3202-900-104-00	$2,504,846
Bloomfield	3202-900-105-00	$2,504,846
Bloomfield	3202-900-106-00	$2,504,846
Bloomfield	3202-900-107-00	$2,504,846
Bloomfield	3202-900-108-00	$2,504,846
Bloomfield	3202-900-109-00	$2,671,052
Bloomfield	3202-900-111-00	$2,504,846
Bloomfield	3202-900-112-00	$2,504,846
Bloomfield	3202-900-113-00	$2,649,834
Bloomfield	3202-900-114-00	$2,504,846
Bloomfield	3202-900-115-00	$2,504,846
Bloomfield	3202-900-116-00	$2,504,846
Bloomfield	3202-900-117-00	$2,504,846
Total	2017	$40,388,730

Township	Parcel Number	2017 TCV per Board of Review
Sigel	3226-900-118-00	$2,504,846
Sigel	3226-900-119-00	$2,504,846
Sigel	3226-900-120-00	$2,504,846
Sigel	3226-900-121-00	$2,504,846
Sigel	3226-900-122-00	$2,504,846
Sigel	3226-900-123-00	$2,504,846
Sigel	3226-900-124-00	$2,504,846
Sigel	3226-900-125-00	$2,504,846
Sigel	3226-900-126-00	$2,504,846
Sigel	3226-900-127-00	$2,504,846
Sigel	3226-900-128-00	$2,865,354
Sigel	3226-900-129-00	$3,018,718
Sigel	3226-900-130-00	$2,504,846
Sigel	3226-900-131-00	$2,504,846
Sigel	3226-900-132-00	$2,504,846
Sigel	3226-900-133-00	$2,504,846
Sigel	3226-900-134-00	$2,502,163
Sigel	3226-900-135-00	$2,502,163
Sigel	3226-900-136-00	$2,502,163
Sigel	3226-900-137-00	$2,502,163
Sigel	3226-900-138-00	$2,502,163
Sigel	3226-900-139-00	$2,502,163
Sigel	3226-900-140-00	$2,605,090
Sigel	3226-900-141-00	$2,502,163
Total	2017	$61,072,147

8. The subject properties are classified as industrial personal property.

9. The highest and best use of the subject properties is its current uses as a wind farm.

10. Both parties have furnished valuation disclosures in the form of appraisal reports.

11. Petitioner's appraisal was prepared by Kevin A. Reilly, ASA, CGA of evcValuation.

12. Respondent's appraisal was prepared by Joseph G. Kettell, ASA, Managing Director of Appraisal Economics with assistance by Sung Kim, Senior Manager.

13. Michael J. McGarry of MJM Consulting, LLC provided Sigel Wind Park's estimated revenue requirements for Respondent's Discounted Cash Flow (DCF) analysis.

14. Petitioner states the subject is appraised as a fee simple interest.

15. Respondent appraised the subject property as subject to the MPSC as a regulated utility.

16. Petitioner's appraisal report includes values for tax year 2016 and 2017.

17. Respondent's appraisal report includes values for tax year 2016 and 2017.

18. Both parties calculated the cost approach.

19. Both parties considered the sales comparison approach, however found insufficient data upon which to base a reliable opinion of value.

20. Petitioner details each portion of the DCF in his work papers.

21. Respondent's DCF was based on DTE's rate base as adopted by MPSC.

22. The parties agree that Sigel Wind Park is subject to PA 295 as a renewable energy facility.

23. Sigel Wind Park utilizes 40 GE Wind Turbines.

24. DTE continued to purchase GE Wind Turbines after Sigel was constructed.

25. Dr. Buda opined that it takes about three years to work out any issues with the wind turbines.

26. Petitioner's TCV as of December 31, 2015, for the Income Approach was $74,000,000, the Cost Approach was $85,000,000 and concluded to $77,000,000.[161]

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[161] P-1 at 81.

27. Respondent's TCV as of December 31, 2015, for the Income Approach was

    $123,200,000, the Cost Approach was $121,600,000 and concluded to

    $121,600,000.[162]

28. Petitioner's TCV as of December 31, 2016, for the Income Approach was

    $75,000,000, the Cost Approach was $90,000,000 and concluded to

    $80,000,000.[163]

29. Respondent's TCV as of December 31, 2016, for the Income Approach was

    $119,000,000, the Cost Approach was $113,100,000, and concluded to

    $113,100,000.[164]

30. Petitioner's 2016 Depreciation was 31% and the 2017 was 23% in the Cost

    Approach.[165]

31. Respondent's 2016 Depreciation was 2.6% and 2017 was 7% in the Cost

    Approach.[166]

32. The subject property is subject to PA 295 of 2008.

33. The subject property is owned by a public utility company Detroit Edison.

CONCLUSIONS OF LAW

211.8 Personal property; scope. Sec. 8. For the purposes of taxation, personal property

includes all of the following:

> (l) For taxes levied after December 31, 2005, a wind energy system. As
> used in this subdivision, "wind energy system" means an integrated unit

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[162] R-1 at 82.
[163] P-1 at 92.
[164] R-1 at 82.
[165] P-1 at 73 and 90.
[166] R-1 at 87 and 167.

consisting of a wind turbine composed of a rotor, an electrical generator, a control system, an inverter, or other power.

The assessment of real and personal property in Michigan is governed by the constitutional standard that such property shall not be assessed in excess of 50% of its TCV.[167] Pursuant to Const 1963, art 9, sec 3:

The legislature shall provide for the uniform general ad valorem taxation of real and tangible personal property not exempt by law except for taxes levied for school operating purposes. The legislature shall provide for the determination of true cash value of such property; the proportion of true cash value at which such property shall be uniformly assessed, which shall not exceed 50 percent.[168]

The Michigan Legislature has defined TCV to mean:

The usual selling price at the place where the property to which the term is applied is at the time of assessment, being the price that could be obtained for the property at private sale, and not at auction sale except as otherwise provided in this section, or at forced sale.[169]

The Michigan Supreme Court has determined that "[t]he concepts of 'true cash value' and 'fair market value' . . . are synonymous."[170]

"By provisions of [MCL] 205.737(1) . . . , the Legislature requires the Tax Tribunal to make a finding of true cash value in arriving at its determination of a lawful property assessment."[171] The Tribunal is not bound to accept either of the parties' theories of valuation.[172] "It is the Tax Tribunal's duty to determine which approaches are useful in providing the most accurate valuation under the individual circumstances of each case."[173] In that regard, the Tribunal "may accept one theory and reject the other, it may

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[167] See MCL 211.27a.
[168] Const 1963, art 9, sec 3.
[169] MCL 211.27(1).
[170] *CAF Investment Co v Michigan State Tax Comm*, 392 Mich 442, 450; 221 NW2d 588 (1974).
[171] *Alhi Dev Co v Orion Twp*, 110 Mich App 764, 767; 314 NW2d 479 (1981).
[172] *Teledyne Continental Motors v Muskegon Twp,* 145 Mich App 749, 754; 378 NW2d 590 (1985).
[173] *Meadowlanes Ltd Dividend Housing Ass'n v Holland,* 437 Mich 473, 485; 473 NW2d 636 (1991).

reject both theories, or it may utilize a combination of both in arriving at its determination."[174]

A proceeding before the Tax Tribunal is original, independent, and de novo.[175] The Tribunal's factual findings must be supported "by competent, material, and substantial evidence."[176] "Substantial evidence must be more than a scintilla of evidence, although it may be substantially less than a preponderance of the evidence."[177]

"The petitioner has the burden of proof in establishing the true cash value of the property."[178] "This burden encompasses two separate concepts: (1) the burden of persuasion, which does not shift during the course of the hearing, and (2) the burden of going forward with the evidence, which may shift to the opposing party."[179] However, "[t]he assessing agency has the burden of proof in establishing the ratio of the average level of assessments in relation to TCVs in the assessment district and the equalization factor that was uniformly applied in the assessment district for the year in question."[180]

The three most common approaches to valuation are the capitalization of income approach, the sales comparison, or market, approach, and the cost-less-depreciation approach.[181] "The market approach is the only valuation method that directly reflects the balance of supply and demand for property in marketplace trading."[182] The Tribunal is

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[174] *Jones & Laughlin Steel Corp v City of Warren*, 193 Mich App 348, 356; 483 NW2d 416 (1992).
[175] MCL 205.735a(2).
[176] *Dow Chemical Co v Dep't of Treasury*, 185 Mich App 458, 462-463; 462 NW2d 765 (1990).
[177] *Jones & Laughlin Steel Corp, supra* at 352-353.
[178] MCL 205.737(3).
[179] *Jones & Laughlin Steel Corp, supra* at 354-355.
[180] MCL 205.737(3).
[181] *Meadowlanes, supra* at 484-485; *Pantlind Hotel Co v State Tax Comm*, 3 Mich App 170, 176; 141 NW2d 699 (1966), aff'd 380 Mich 390 (1968).
[182] *Jones & Laughlin Steel Corp, supra* at 353 (citing *Antisdale v City of Galesburg*, 420 Mich 265; 362 NW2d 632 (1984) at 276 n 1).

under a duty to apply its own expertise to the facts of the case to determine the

appropriate method of arriving at the TCV of the property, utilizing an approach that

provides the most accurate valuation under the circumstances.[183] Regardless of the

valuation approach employed, the final valuation determined must represent the usual

price for which the subject would sell.[184]

The facts, conclusions, and opinion of this case are of first impression and are

related to this specific case and may or may not be relevant to other cases (which are

dependent on the facts, evidence, and statutes at the time.). This is an opinion of the

TCV (i.e. fair market value) of Sigel's industrial personal property, owned by DTE.

Simply, the Tribunal has considered the evidence, testimony and statutes and has

weighed the credibility of the testimony and exhibits to determine the market value of

Sigel, as explained below.[185]

PA 295 is the Clean and Renewable Energy and Energy Waste Reduction Act

passed in October 2008, setting Michigan's Renewable Energy Standard that requires

energy providers to generate certain percentages of the annual electricity sales from

renewable sources; specifically, it mandates 10 percent by 2015; 12.5 percent by 2019;

and 15 percent by 2021. In addition to the requirements of PA 295, DTE was required to

install 300 MW of renewable energy by year-end 2013 and establish a 600 MW capacity

by year-end 2015. Consumers Energy also was required to produce 200 MW by year-

end 2013 and 500 MW by year-end 2015. The companies could either build renewable

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[183] *Antisdale, supra* at 277.
[184] See *Meadowlanes Ltd Dividend Housing Ass'n v Holland*, 437 Mich 473, 485; 473 NW2d 636 (1991).
[185] The Tribunal reminds the reader that the value sought is not for DTE, as an entity, but a single wind park.

capacity or purchase capacity through PPAs with independent renewable providers. The required renewable energy capacities were fulfilled by both companies.

Renewable energy certificates (REC) are generated from energy from renewable energy resources. One REC is generated for every MWh produced from a renewable resource. They can be obtained from owned renewable resources, they can be purchased on the secondary market, or obtained through a PPA.

A PPA is a contract between a power generator and a third party to sell energy. PPAs eliminate price volatility that may happen when selling energy in the wholesale market. It provides economic stability with a steady long-term revenue. The subject property did not have a PPA in place as of either of the tax dates at issue.

The subject property consists of 40 individual GE 1.6-100 wind turbines: sixteen are located in Bloomfield Township and twenty-four are located in Sigel Township, in Huron County. The initial date of operation was December 2012. The blade length is 48.7 meters tall (159.7769 feet) and hub heights are 80-100 meters (262.467- 328.084 feet). The park is located on 8,600 acres.[186]

The location adjacent to the shore of Lake Huron has favorable wind speed due to the surrounding water on three sides. The "Thumb Area" of Michigan is the best location for a wind park due to the average annual speed of the wind. Nationally, this area is considered "a medium wind source."[187]

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[186] In addition to the 40 turbines, Sigel has utility personal property consisting of a meteorological tower, a substation, underground collector circuits, and interconnection equipment. "The electricity generated at each turbine is collected by three parallel collector circuits and routed to a common substation in Sigel Township for Transfer to a power grid." Respondent's Exhibit 1 at 17.
[187] As of February 2016, eleven of the fourteen wind parks operating in the "Thumb Area" were located in Huron County. Respondent's Exhibit 1 at 18.

Wind parks stagger the turbines approximately 1,000 feet apart to prevent interference with wind patterns caused by the spinning blades. Electricity is collected in underground collection lines at the base of the tower and is then transported to a collector substation, then on to the interconnecting power line in the power grid.

It is important to note that the power generation market is deregulated. This allows independent power producers to sell their power to consumers. Competition may be an incentive for efficiency and lower costs.

The Energy Policy Act of 1992 ordered FERC to instruct public utilities to provide access to power generators so they could use the national power grid. FERC issued an order in 1999 that required the RTOs to promote cooperation between generators. This resulted in the formation of ISO to coordinate, control, and monitor the operation of the power system within an area, after meeting certain requirements. They function where generators can sell wholesale power, supply to meet the electrical demands, and set the price. The subject property is in the MISO.

During the 2015-2016 time period, the economic environment in MISO was favorable to the construction of renewable energy. Wind turbines at that time were the most economically prudent renewable energy.[188] In relation to the valuation of a wind farm, the premise of the cost approach is that a prudent buyer would not pay more for a wind farm than the capital cost to construct one of equal utility.

Government incentive programs were created to promote renewable energy projects (including wind turbines) by making them economically competitive with traditional fossil fuel power plants. Thus, the PTC, ITC, and Section 1603 grants were

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[188] Respondent's Exhibit 1 at 67.

considered by both parties to determine the TCV of the subject properties as of the tax dates at issue.

The PTC is an income tax credit for energy produced by a taxpayer from a renewable energy resource (wind) at a qualified facility and sold to an unrelated party. The PTC is available for ten years after the facility is placed in service.[189] The PTC provides a similar economic benefit as the Section 1603 Grant and the ITC, but it is based on electricity produced and is not based on initial construction costs. For obvious reasons, wind parks in "high wind" areas benefit more than wind farms in "low wind" areas. Thus, DTE selected the ITC incentive for Sigel. The wind turbines qualified for 2.3 cents per kWh for the 2015 tax date, and increased to 2.4 cents per kWh in 2016.[190]

The ITC is an income tax credit of 30% of total qualified costs of constructing qualifying wind plants. The Consolidated Appropriations Act of 2016 extended the ITC for qualifying wind farms if construction started prior to January 1, 2017, and if the wind farm was placed in service by December 31, 2020. Credits are scaled-down after 2020.[191]

A qualified wind facility can claim either a PTC or an ITC, but not both.[192] The remaining years of an unexpired PTC can transfer to a future owner. The ITC not only does not transfer, if an owner transfers ownership within five years of the placed-in-service date, the taxpayer is also required to repay a prorated amount of the ITC back to the IRS.[193]

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[189] I.R.C. § 45(a).
[190] Respondent's Exhibit 1 at 16.
[191] I.R.C. § 48(a).
[192] I.R.C. § 48(a)(5)(B).
[193] I.R.C. § Section 50(a)(1).

The Section 1603 Grant provided a cash grant of 30% of the eligible construction

costs in lieu of an investment tax credit; the Section 1603 Grant was extended until

January 3, 2012, and the benefits of the cash grant do not transfer to a future owner.

Both parties prepared USPAP-compliant appraisals according to the reports. The

Sales Approach was considered; however, only one sale was considered comparable.

Neither party had sufficient data to support relying upon only one sale. The parties went

into great detail in their DCF analysis, and theircost approach. Petitioner is requesting a

reduction to $77,000,000 for 2016 and $80,000,000 for 2017. Respondents are

requesting an increase to $121,600,000 from the 2016 TCV of $105,075,806 and an

increase to $113,100,000 from the 2017 TCV of $101,460,147. Each party presented an

appraisal, exhibits, and testimony.

The highest and best use of the subject property is where the parties diverge into

the path of how the value of the subject property was considered. Petitioner explained

the components of the highest and best use analysis - physically possible, legally

permissible, and most profitable. "Financially feasible" was explained as follows:

> To be financially feasible, the subject must generate sufficient revenues to
> result in a positive cash flow. To determine the financial feasibility of the
> subject as of each tax date, the current and future economic prospects of
> PPAs for existing wind farms within the MISO energy market in which the
> subject operates were analyzed and reviewed as of each appraisal date.
> Utilizing market [based PPA revenues and operating expense projections,
> free cash flows were developed for the subject property into the future in
> the form of a discounted cash flow (DCF) model.[194]

Respondents state that:

> The subject property is designed for the specific use of generating electricity
> from wind on a commercial scale and, as such, is considered special
> purpose property. The highest and best use of special purpose property is

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[194] Petitioner's Exhibit 1 at 31-32.

continued use for which it was designed. A prospective buyer would not consider any other use because the property was optimally designed to serve this distinct purpose . . . PA 295 is a value influencer along the lines of a PPA whose terms may not be duplicated in a hypothetical transaction as of the Assessment Dates…Given the provisions of PA 295, DTE Energy would most likely continue operating Sigel Wind Park as a wind park to fulfill its mandated RES requirement . . . Certainly, a PPA could be constructed that provides terms equivalent to the benefit received under PA 295.[195]

The sales comparison approach compares properties that are similar to the subject that have sold within a reasonable time period and adjusted for differences in amenities. While both parties considered the sales comparison approach, sufficient information was not available to determine the motivation of the parties, level of intangible assets, and the portion of the compensation paid for the real and personal property assets. Neither appraiser in this instance were involved in any sale transaction, due to lack of public data, both concluded that the sales approach was considered; however, it lacked specific data upon which to develop an indicator of the TCV.

The income approach utilized by both parties is a DCF analysis which is described as:

The procedure in which a discount rate is applied to a set of projected income streams and a reversion. The analyst specifies the quantity, variability, timing, and duration of the income streams and the quantity and timing of the reversion and discounts each to its present value at a specified yield rate. [196]

In the matter of personal property, valuing personal property via the cost approach is akin to valuing real estate via the cost approach; that is, a prudent buyer would not pay more for a wind farm than the capital cost to construct one of equal utility.

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[195] Respondent's Exhibit 1 at 24-25.
[196] Appraisal Institute, *The Appraisal of Real Estate,* 14th ed. (Chicago: Appraisal Institute, 2013), 511.

The two experts who completed valuation disclosures (i.e., appraisals) are Mr. Reilly, a Certified General Appraiser in Michigan, and a Senior Appraiser of ASA and Mr. Kettell, who is not an appraiser. However, Mr. Kettell also holds a Senior Appraiser of Business Valuation and a Machinery and Equipment Appraiser with the ASA. Both appraisers utilized a DCF method, both inspected the subject property, and both made consultations. Mr. Reilly consulted with eight to twelve employees of DTE, as well as Consumer's Energy. Mr. Kettell met with Dr. Buda, walked around the subject property, and relied upon Mr. McGarry's extraction from MPSC as the basis for the income approach. Both Appraisers utilized information from similar and dissimilar sources and utilized a DCF income approach.

Respondents' witness, Dr. Buda, Manager of Thumb Wind Parks, explained the wind turbines' initial operational issues and details. Dr. Buda's testimony was very informative in explaining how the turbines function and outlining some of the start-up issues, including the GE balancing issues of the turbine blades, integrity pitch motor integrity, gearbox concerns, batteries, and controls.

GE Wind Turbines are utilized in the three Huron County wind parks. Dr. Buda testified that Sigel had a blade break in half, which is unusual; however, he explained that although lightening caused it, there was an underlying manufacturer's defect. Dr. Buda went further into the details on the actual turbines. This included the turbines and issues with blade failure, tower vibration, and issues that led to changing the seals on the pitch motor because the oil was not compatible with the replaced seal.

Dr. Buda was also responsible for projecting $11 million CAPEX in five-year increments for the Thumb Wind Park. Sigel has 40 wind towers out of DTE's 277 wind

towers.[197] Gearbox replacement is part of CAPEX in DTE's budget, which is not double

entered. Sigel's CAPEX for 2016 $524,000; 2017 $902,000 and 2018 $1.2 million,

which includes gearbox replacements or rebuilds.[198] The estimated cost for a rebuild (7-

10 days), which includes crane, crew, and crane pad, is estimated to cost $490,000.

Dr. Buda's experience with start-up issues indicates that 36-months is appropriate to

smooth out issues. It is noted that the subject property was, as of December 31, 2015,

three years old.

Mr. Transeth, a former MPSC member, worked on PA 295 as an attorney in the

Legislative Service Bureau. He explained how PA 295 came into existence and MPSC

case U-18242 regarding pretax rate of return. Dr. Heaton, who has a Ph.D. in finance

from Stanford University, was also of assistance in explaining, among other issues, the

difference in DTE and Consumer's Energy's treatment of Deferred Federal Income Tax

(DFIT). DTE's rate base is adjusted to deduct DFIT and the WACC reconciliation is

11.16% and 11.12%, respectfully. Consumer's does not adjust the rate base for DFIT;

however, it is adjusted in their WACC, which was 8.94% and 8.70% for the tax years at

issue. The Tribunal notes that Mr. McGarry did not deduct DFIT for DTE in his plant in

service and Accumulated Depreciation projection. In addition, his pre-tax WACC rate is

overstated at 11.63%. This error flows directly into Mr. Kettell's DCF's projected

revenue requirement.[199]

Respondents' appraiser, Mr. Kettell, prepared the appraisal utilizing Mr.

McGarry's calculations for plant in service, which was the beginning of Respondents'

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[197] Respondent's Exhibit 69 at 71.
[198] Petitioner's Exhibit 12.
[199] Respondent's Exhibit 1 at 143.

DCF. Mr. Kettell also created depreciation tables for MREC that are used where wind

turbines are being assessed in lieu of the STC tables.[200]

On cross-examination of Mr. Reilly, Respondents went back and forth on the

equity risk premium and whether it should use the arithmetic mean or the geometric

mean. They are described as:

> Arithmetic Mean is calculated by summing the values of all of the observations on a variable and dividing by the sample size. It is the most commonly reported measure of central tendency. It is affected by extreme values, which may distort it.

> Geometric mean is the central tendency for compound financial returns over time can be measured by geometric mean. The geometric mean is an important financial concept.[201]

The Tribunal notes that the geometric mean is always less than the arithmetic

mean unless all of the numbers in the data set are the same (i.e., 2,2,2,2). The

arithmetic mean is the most commonly utilized as well as most easily understood.

However, this is a non-issue as neither party utilized the geometric mean.

Petitioner's appraisal cites MCL 211.27 for ad valorem tax purposes in Michigan.

The standard of value is TCV. Respondents also correctly cite MCL 211.27; however,

Mr. Kettell adds, "[t]he courts in Michigan have recognized that True Cash Value is

synonymous with fair market value."[202] Respondents' valuation disclosure further states

that:

> The fair market value for property tax assessment purposes of a special purpose or limited use facility, such as Sigel Wind Park, is the value which would be realized by the owner if it were sold on the Assessment Dates to a purchaser who would continue operating the facility pursuant to its design as a wind park. As we explain in Section 5.2, Michigan's Public Act 295 ("PA

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[200] MREC is an association for a group of jurisdictions that have wind property.
[201] AREA at 280.
[202] Respondent's Exhibit 1 at 13.

295") provides cost recovery mechanisms for DTE Energy that provide
recovery of its investment and achieve its allowed regulated rate of return
on investment. Our determination of the true cash value of Sigel Wind Park
reflects its financial benefit under PA 295.[203]

Respondents' valuation disclosure, regarding highest and best use, states, "The
subject equipment is designed for the specific use of generating electricity from wind on
a commercial scale and, as such, is considered special purpose property. The highest
and best use of a special purpose property is its continued use for which it was
designed."[204] Respondent cites *TES Filer City Station v Township of Filer* (MTT Docket
No. 192808) for the proposition that "the highest and best use should be as specific as
the marketplace suggests, which is a power plant under its current PPA."[205]
Respondents conclude that PA 295 is a value influencer akin to a PPA. It provides an
investment recovery mechanism for recovering the investment in renewable energy.
Respondents opined that "a PPA could be constructed that provides terms equivalent to
the benefit received under PA 295."[206]

The Tribunal finds that Respondents' interpretation of "fair market value" for the
subject property appears on the surface to indicate a value-in-use, not a value-in-
exchange. Michigan is a value-in-exchange state and has been since prior to statehood.

The Appraisal of Real Estate defines "use value," which is often interchangeable
with "value in use," as "the value a specific property has for a specific use."[207] It further

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[203] Respondent's Exhibit 1 at 13-14.
[204] Respondent's Exhibit 1 at 29.
[205] Respondent's Exhibit 1 at 30.
[206] Respondent's Exhibit 1 at 31.
[207] Appraisal Institute, *The Appraisal of Real Estate,* 14th ed (Chicago: Appraisal Institute, 14th ed, 2013),
p 62.

explains that "[r]eal property has both a use-value and a market value, which may be the same or different depending on the property and the market."[208]

Michigan's Constitution requires that real property be assessed at 50% of its TCV.[209] The concept of "true cash value," however, predates even the 1893 General Property Tax Act (GPTA).[210] The term goes at least as far back as 1838 when the law required assessors to appraise property at its TCV.[211]

The Sixth Circuit recognized that "[t]he Michigan Legislature has defined 'cash value' in essentially the same language since 1882: 'The words 'cash value,' whenever used in this act, shall be held to mean the usual selling price at the place where the property to which the term is applied shall be at the time of assessment, being the price which could be obtained therefor at private sale, not at forced or auction sale.'"[212]

As early as 1887, our Supreme Court recognized that TCV "means not only what may be put to valuable uses, but what has a recognizable pecuniary value inherent in itself, and not enhanced or diminished according to the person who owns or uses it."[213]

Both parties found that the highest and best use was to produce energy by wind; then they digressed. Petitioner's witness determined the value of the subject property for the highest value, indicating that an independent operator or a regulated entity could

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[208] *The Appraisal of Real Estate*, p 62.
[209] Const 1963, art 9, § 3.
[210] 1893 PA 206.
[211] See 1838 RS tit V, ch 2, § 2 ("The assessors of each township, according to the best evidence in their power, shall, either by visiting the residence of each individual, or inquiring personally of the owner or occupancy of any estate real or personal to be taxes, make out a true list of all the estate real and personal not exempted from taxation within their townships respectively, and shall appraise the same at its TCV.").
[212] *Helmsley v City of Detroit*, 380 F2d 169, 170–171 (CA 6, 1967) (citing 1948 CL 211.27).
[213] *Perry v City of Big Rapids*, 67 Mich 146, 147; 34 NW 530 (1887). This language was later quoted by our Supreme Court in *Washtenaw Co v State Tax Comm*, 422 Mich 346, 370 n 4; 373 NW2d 697 (1985).

purchase the wind farm. Respondents appraised the property under PA 295, leaning

heavily on the subject as a regulated utility.

Both parties prepared and presented a DCF analysis. Petitioner's work files

detailed each part of the inputs for the DCF. Respondents utilized MPSC data to

determine the net plant in service, which was the beginning point in the DCF analysis.

The parties both considered the sales comparison approach. Petitioner

discusses the difficulty of the sales approach with complex wind farms. Each has unique

qualities and operational characteristics that adjustments are difficult to rectify. Each

wind farm has distinct internal characteristics, including capacity, net generation levels,

make and model of equipment, and expenses, with a unique cash flow specific to the

facility. External factors include location, transmission constraints, market strength,

competition, supply, demand time, and more. Assets may include above-market PPAs

and workforce technical drawings. Without being directly involved in a transaction, it is

impossible to discern what portion of a sale price is for tangible assets. Sales could be

for the rights to undeveloped wind farms for the partial interest or to maximize federal

income tax depreciation benefits.

Petitioner presented six transactions; two were in Michigan, Apple Blossom,

which was not built but had a $43 PPA with Consumers Energy before the July 2016

sale for $22,000,000. Brookfield (Pheasant Run II) had a PPA to sell all of its electrical

generations to DTE and an option agreement for purchase. DTE's renewable portfolio,

however, was only 20% at the purchase. Its LCOE was $49.25. While the sales

approach was considered, Petitioner found it could not be utilized to determine a

meaningful opinion of value due to the lack of specificity of the transactions.

Respondents considered 21 wind farm sales from 2012 to 2014, with one Michigan sale, Brookfield (Pheasant Run II). It has the same highest and best use after the sale as the subject property. The purchase agreement was on May 30, 2014. The purchase price was for 100% of the outstanding membership interest for $157.1 million. Plus, an adjustment for net working capital (per a DTE confidential document). Respondents deduct 8% working capital resulting in $123,300,000, subject to PA 295, which also controls the operation of the subject property after the sale.

Respondent considered one sale to which access to the operating and financial information necessary to make a determination was not available. Even with limited data, Respondent found that the one sale of Pheasant Run II has a high degree of comparability to the subject and provides proper support for the income and cost approach at $2,000,000 per MWh or $128,000,000. The Tribunal finds that the use of one sale without all of the underlying facts and information is speculative on Respondents' part. It is not logical nor based on sufficient facts to make such a conclusion. The Tribunal agrees with Petitioner and finds the sales comparison approach does not provide a meaningful indication of the TCV of the subject property.

The cost approach, considering both the reproduction cost and the replacement cost, was also utilized by the parties.

> Reproduction cost is described as, the estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies, super adequacies, and obsolescence of the subject building.
>
> Replacement cost is described as the estimated cost to construct, at current prices as of the effective appraisal date, a substitute for the building being

appraised, using modern materials and current standards, design, and layout.

The use of replacement cost can eliminate the need to measure some, but not all, forms of functional obsolescence such as super adequacies and poor designs. Replacement structures usually cost less than identical structures (i.e., reproductions) because they are constructed with materials and techniques that are more modern, more readily available, and less expensive in the current market. Estimating reproduction cost can be complicated because the improvements may include materials that are no longer available and construction standards or codes may have changed.

Nevertheless, reproduction cost usually provides a better basis for measuring depreciation from all causes when that sort of measurement is necessary. [214]

Petitioner's mathematical representation of the cost approach is:

Reproduction Cost New
<u>Less Functional Obsolescence due to Excess Capital Costs</u>
Equals RCN
Less
Physical Deterioration (PD)
Functional Obsolescence (FO)
Economic Obsolescence (EO)
Curable Deterioration and Curable Obsolescence
<u>Curable FO/EO due to Necessary Capital Ventures</u>
Equals Cost Approach Indicator of Value of Improvements
<u>Plus Land Value</u>
Equals *Cost Approach Indicator of Value*[215]

Reproduction cost new creates an exact replica of the subject, then the RCN (that is equal to a new facility with equal utility to the subject) is developed. If the RCN is less than the reproduction cost new, the difference is excess capital costs, which is considered a form of functional obsolescence. The economic environment in the MISO was favorable to the construction of renewable energy resources.[216]

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[214] Appraisal Institute, *The Appraisal of Real Estate* (Chicago: Appraisal Institute, 14th ed, 2014), p 570, 571.
[215] Petitioner's Exhibit 1 at 66.
[216] Petitioner's Exhibit 1 at 67.

Petitioner's RCN utilized DOE and NREL publications to determine the cost to replicate the subject is $123,968,000. The effects of the ITC or PTC were then considered. Mr. Reilly selected the ITC, 95% of the (qualified) cost was reduced by 30% ($35,330,880) resulting in $89,000,000.[217] Physical depreciation considers the effective age and physical life equaled 11% ($9,790,000) deduction equaling $79,210,000.

Petitioner prepared an income return shortfall that captures both EO and FO for the excess operating expenses as the subject property is less efficient compared to the modern facility. Newer turbines have higher hubs and rotor diameters and increased the wind turbines to 2 MW (the subject is 1.6 MW). The income shortfall compares an income approach indicator of value and the cost approach (before EO deduction) to determine an income shortfall indicating economic obsolescence.

Petitioner used the replacement plant at 42.7% Capacity Factor, $42 PPA, an after-tax discount rate of 9.4% minus 2.0% cash flow growth for 7.40%. The present value of cash flow is $61,751,112, deducted from the $89,000,000 RCN is $27,248,888 divided by $89,000,000 is 31% obsolescence ($24,600,000). Resulting in $54,610,000 plus $30,000,000 (Present Value of Property Tax Credit) and $556,200 land value for a rounded $85,000,000 via the cost approach for 2016, and $90,000 for tax year 2017.

Petitioner's 2016 calculations are:

RCN	$123,968,000		RCN	$89,000,000
ITC 95%	$117,769,600		less Physical Dep 11%	-$9,790,000
Minus 30%	-$35,330,880		RCNLD	$79,210,000
Net RCN	$89,000,000		less Economic/Functional Obs 31%	-$24,600,000
			Cost of Value of Improvements	$54,610,000
11% Physical Dep	-$9,790,000		Plus PV of PTC	$30,000,000
RCNLD	$79,210,000		Plus Land Value	$556,200
			Cost Approach Indication of Value	**$85,000,000**
RCN	$89,000,000			

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[217] $1,937 ($/kW) x1000 is $1,937,000 MW multiplied by 64 MW is $123,968,000.

PV of Cash Flows	$61,751,112
Shortfall	$27,248,888
Economic/Functional Obs	
27248888 / 89,000,000	31.0%
PV of PTC	$30,000,000

Respondents also describe the reproduction cost new; he utilizes Sigel's Original Construction Costs. The original cost of Sigel was recorded in the property record list.[218] The list includes the following: Misc. Power Plant Equipment – Tower (Retirement Unit), Meter Cabin, Turbines, Transformer, Tower, Access Roads, Foundations, FAA Lighting, Collector System, Building, Control House, Right-of-way, Transmission Line, Misc. Power Plant Equipment, all of which totals $142,401,000 or $2.2 million per MW.

Respondents' RCN considered DOE and NREL, which indicate a decreasing trend from $1,690 (2015) to $1,590 (2016). The EIA cost averages were $1,644 and $1,686. Mr. Kettell utilized the 2014 construction costs for Echo Wind Park, Brookfield Wind Park (Pheasant Run), and CrossWinds Park. The costs ranged from $2,177,000 to $2,219,000 per MW. This results in $128,000,000 and $121,600,000.

Respondents' useful life analysis included 1) MPSC case U-16991 (July 8, 2014), ruling that wind plants have a life of 25.5 years or 3.71% per year. 2) Consumers Energy's June 5, 2017 request for proposal, as well as a settlement with MPSC (case U-16536) issued in later years for 31.2 years. 3) The Iowa Curve indicates depreciation between 2% to 10%. 4) Marshall and Swift's depreciation table indicates 5%. 5) *WindEconomics*, May 29, 2018, indicates that earlier wind turbines still operating provides evidence to the Respondents' determination that 30 years is reasonable for Sigel's turbines.

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[218] Respondent's Exhibit 1 at 71; DTE also provided the list to the taxing jurisdictions.

Respondent calculated the present value of future income, using an annuity

discount factor, three-years-old, 30-year life expectancy, and a rate of return (discount

rate of 8.5%); the physical depreciation was calculated at 2.6% per year.

Respondents then considered functional obsolescence due to taller turbines with

longer blades and higher speed due to the elevation and improved computer controls

for blade pitch during varying wind speeds. These were considered factors that affect

production. The subject's 42.7% capacity factor of Sigel Wind Farm is higher than the

average 39% for medium wind resources in 2015.[219] Zero functional obsolescence was

concluded by Respondents.

Respondents' RCN is $128,000,000 less 5% physical depreciation, zero

functional obsolescence, for an RCN less physical equaling $121,600,000. This is less

than the direct capitalization of $122.9 million, which results in zero economic

obsolescence—resulting in Respondents' TCV of $121,600,000 and $113,100,000 as of

the tax dates at issue for the cost approach. Respondents suggest an increase in value

for the three and four-year-old subject property over the personal property multipliers

that Mr. Kettell created four or so years ago.

Respondent's cost calculations are:

Respondent's 2016 Summary	
RCN	$128,000,000
Less 5% Physical Depreciation	-$6,400,000
less Functional Obsolescence	$0
RCNLD	$121,600,000
Economic Obsolescence equals	
RCNLD	$121,600,000
Minus Direct Capitalization	-$122,900,000
Equals Economic Obsolescence	0%
Cost Approach Indication of Value	$121,600,000

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[219] R-1 at 78.

DTE utilized the same GE Wind Turbines in subsequent wind parks Echo-Pinnebog and Pine River. Dr. Buda considered the issues: balance of the turbine blades, integrity, pitch motor, gearbox concerns, and batteries controls "commissioning" for the initial 24-36 months. DTE competitively bids for new wind parks. More than 500 MWh of wind power was generated with the GE Wind Turbines at the time of the hearing.

The Tribunal finds Petitioner's 2016 obsolescence of 31% is excessive for the three and four-year-old subject property and is given no credibility.

The Tribunal notes that both parties have stated that the Federal Incentives are specific. The parties can pick ITC or PTC, but not both. Petitioner's cost new for 2016 of $123,968,000 begins with a $35,330,880 deduction for the ITC, and ends with $30,000,000 PV of the PTC added back. Petitioner utilized both the ITC and PTC, which is simply not allowed. Petitioner's $123,968,000 RCN minus 11% physical equals $110,331,520, obsolescence of $24,600,000 (31%) is not accepted as appropriate for a three-year-old facility,[220] $85,731,520 plus $30,000,000 present value of the PTC, and $556,200 land value are added for a rounded TCV of $116,300,000 for 2016. 2017 was calculated similarly; however, obsolescence was 8%, which resulted in $114,000,000. Although the Tribunal gives an example of Petitioner's cost calculation, Petitioner's cost approach is not given any weight. The use of both the ITC and PTC as well as 31% obsolescence for the three-year-old subject property is not believable and given no weight.

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[220] The Tribunal does not find that the three-year-old subject property has 31% obsolescence due to the simple fact that DTE continued to purchase the same turbines for the next three wind parks. Tr. 5 at 884.

Respondents began with the original 2012 cost of $2.25 million per MW, stating

that the sources indicate that the costs have decreased from the tax years at issue.

The estimates begin with construction costs for three 2014 wind farms at $2.2 million

per MW, DOE, NREL, *WindTechnology,* and EIA. The costs in millions per MW in 2015

ranged from $1.644 to $2.2; in 2016 $1.590 to $2.24. Respondents selected $2.0 million

and $1.9 million per MW for a cost new of $128,000,000 and $121,600,000. The higher

end of the selected cost is slightly less than the subject's construction cost of $2.25

million and the $2.2 million 2014 construction of Echo Wind Park, Brookfield (Pheasant

Run) Wind Park, and Cross-Winds Wind Park.

The Tribunal notes that both parties have evidence that constructing new wind

energy has decreased since Sigel was built in December 2012. Respondents'

depreciation curves used a 30-year expected life at an 8.5% discount rate indicating

depreciation between 2% to 10%. Respondent selected 5%.   Respondent's estimate of

physical life expectancy relied on information from June 2017, and three separate

sources from 2018 to conclude to a 30-year life expectancy. The reliance on sources

that would not have been known or knowable as of the December 31, 2015, and

December 31, 2016 tax dates at issue is simply not considered by this Tribunal as they

are future calculations. Respondents' only timely resource is the December 2015 MPSC

ruling of 25.5 years or 3.71% per annum based on the regulatory depreciation rate for

wind farms.[221]

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[221] R-1 at 78.

Respondents' $1.9 million per MW (2016) and $1.7 per MW (2017) with 3.71%

physical depreciation per year, and no functional or economic obsolescence would lead

to a revised TCV for Respondents' cost approach for 2016 and 2017 .

The cost approach as applied by both parties is considered but given minimal

weight due to Petitioner's double dipping of the ITC and PTC, (which drastically reduced

the value) and Respondent's use of depreciation based on sources that were not known

or knowable as of the tax dates at issue, to determine minimal depreciation, and lack of

functional and economic obsolescence when there was timely information which led to

an over valuation of the subject property

Both parties utilized a DCF analysis. The detailed analysis and testimony are

found in each parties' summary, a brief analysis that outlines major issues the Tribunal

found after painstakingly recreating each party's DCF. Both parties agree that Sigel is a

regulated facility under MPSC.

Mr. Reilly prepared the appraisal for Petitioner, utilizing the "current market" rate

of a PPA as the basis for the income approach's DCF. It is typical for potential

purchasers to use the income approach to simulate a purchase and financial reporting

purposes. The basis for Petitioner's income is Apple Blossom Wind Farm. The free cash

flows were discounted to the valuation dates. "The concluded property tax adjusted

after-tax discount rate is used to develop mid-year convention present value factors to

discount Years 1 through 10 of the projected free cash flows for the subject in the DCF

analysis."[222]

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[222] Petitioner's Exhibit 1 at 58.

Petitioner's DCF was based on a $43/MWh PPA approved by MPSC on

November 9, 2015, for Apple Blossom Wind Farm that was not completed and put into

service in October 2017.[223] The Tribunal notes that the $43 was lower than Consumer's

Energy other renewable energy purchase agreements because "the contract price for

Apple Blossom is lower than the company's other REPAs, as well as its average power

supply cost price, in part, because Geronimo is expected to take advantage of the

federal Production Tax Credit (PTC)."[224]

The lower price PPA is reflected in the income produced. Petitioner's use of the

lower value PPA under-states the income from $4 to $6 million.

Petitioner determined the discount period and ensuing present value factor

utilizing a half-year convection in both the DCF and Sensitivity DCF's. The use of the

half-year convection is also a first impression by this Tribunal, and after researching, it

made little sense. The best explanation found is an assemblage of resources (and is

this Tribunal's understanding) of the half-year convection (from a myriad of sources) is

where any asset purchased within a year is assumed to have been purchased at the

mid-point of the year (and a taxpayer can add another half-year of depreciation at the

end of the recovery period). It is pertinent for income tax depreciation for certain

properties found in the Federal Income Tax Code Section 168(d)(1) and 168(d)(4). The

Tribunal finds that Petitioner's use of the mid-year convection is a standard for

investment bankers, again resulting in reduced liability for income tax purposes, not

appraisers in determining the TCV as of December 31, 2015, and December 31, 2016.

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[223] This is after December 31, 2016, the last tax date at issue.
[224] MPSC U-15805, November 19, 2015 Order, at 2.

Petitioner's income tax depreciation and amortization expense is a "non-cash"

expense used to calculate income taxes (which again does not represent an actual cash

outlay). The MACRS tables from IRS Publication 946 "states that wind generation

assets can be depreciated using a 5-year MACRS schedule."[225] Petitioner's DCF

utilizes MACRS in the line item for depreciation and amortization as follows:

	2016	2017	2018	2019	2020
Revenue	$10,292,351	$10,292,351	$10,292,351	$10,292,351	$10,292,351
Dep-Amortization	$15,086,981	$24,233,472	$15,426,286	$9,911,396	$10,128,642
% of Revenue	146.58%	235.45%	149.88%	96.30%	98.41%

The first three years in Petitioner's DCF depreciation exceeds the revenue; the

following two years are barely less. The utilization of the IRS accelerated MACRS

depreciation is inappropriate for valuing the subject property, as it is for financial

reporting of income tax (lowering income tax liability). IRS accelerated MACRS

depreciation does not depreciate the personal property over its life to determine its TCV

for property tax purposes. In addition, the five-year MACRS as utilized in the DCF starts

with 2016 (the subject property was three years old). Petitioner, for tax year 2017, also

restarted the depreciation with the five-year MACRS accelerated depreciation. MACRS

accelerated depreciation is not appropriate for determining depreciation in a matter of

TCV for property tax purposes.

Depreciation is described as the difference between the contributory value of an

improvement and its cost at the time of appraisal.

> Depreciation is the difference between the market value of an improvement
> and its reproduction or replacement cost at the time of the appraisal. Book
> depreciation is an accounting term that refers to the amount of capital
> recapture written off for an asset on the owner's books for income tax or

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[225] Petitioner's Exhibit 1 at 44.

financial reporting purposes…in the United States, the term has typically been used in income tax calculations to identify the amount allowed as accruals for the retirement or replacement of an asset under the federal tax laws. Book depreciation may also be estimated using a depreciation schedule set by the Internal Revenue Service. Book depreciation is not market-derived like the depreciation estimates developed by appraisers.[226]

In addition, after researching, Petitioner's utilization of accelerated federal income tax depreciation (MACRS) to estimate depreciation in a property tax analysis was not found in any learned treatise. Properties, including the subject personal property, depreciate less when new and depreciation gradually increases as they age.

The Tribunal also notes that the net operating income (NOI) for the first five years of Petitioner's DCF are negative, again, due to the utilization of MACRS depreciation which results in negative NOI's of $7.3, $16.4, $7.4, $2.1, and $2.3 million for the first five years. To apply the income approach, the forecasted income stream must be positive.[227] The end result of calculating the Free Cash Flow includes adding back the depreciation and amortization, which results in a reduced present value.

This Tribunal finds that, at best, Petitioner's DCF results are less than stellar based on the unusual and inappropriate techniques (as outlined above) utilized in determining TCV in a property tax appeal. Petitioner utilized the same methodology in both the 2016 and 2017 tax years. The 2017 calculations included a $47/MWh PPA, which results in a higher net generation/revenue. Petitioner's resulting value via the DCF as of December 31, 2015, is $74,000,000 and as of December 31, 2016, the value is $75,000,000. The Tribunal gives no weight to Petitioner's DCF.

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[226] Appraisal Institute, *The Appraisal of Real Estate* (Chicago: Appraisal Institute, 14th ed, 2013), p 377.
[227] Petitioner's Exhibit 14, *Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets* Third Edition American Society of Appraisers at 135; Appraisal Institute, *The Appraisal of Real Estate* (Chicago: Appraisal Institute, 14th ed, 2013), at 577.

Regarding Respondents' DCF analysis, Respondents utilized DTE's rate base case from MPSC case U-18802. Respondents' rate expert, Mr. McGarry, explained how the information extracted from MPSC's DTE and Consumers Energy rate cases were utilized in Mr. Kettell's DCF.

Mr. McGarry also explained the methodology and the source data used to develop the revenue requirement that DTE will collect to recoup its investment in Sigel. He calculated the 2015 and 2016 revenue requirement and also requested a forecast for 2017 through 2024. Respondents determined that the expected life span of a wind farm was 30 years. The basis for the DCF was calculated to the remaining life expectancy of 27 years. Mr. Kettell utilized Mr. McGarry's plant-in service calculation as the projected revenue requirement for Respondents' DCF. Sigel was appraised as a regulated facility based the cost recovery provisions of PA 295, as DTE Energy is expected to obtain its full return of, and return on, its investment.

> DTE Energy would only sell Sigel Wind Park if it was able to obtain a price equivalent to the allowed recovery mechanism provided by PA 295. Therefore, a new power purchase agreement with the hypothetical buyer of Sigel Wind Park would need to be at an electricity price that provides revenue comparable to that allowed under PA 295. . . . A "forced sale" is not an appropriate premise when determining True Cash Value.[228]

MPSC rate experts were Mr. Transeth and Mr. McGarry. Mr. McGarry also provided DTE projected revenue requirements, utilizing MPSC case U-18802, for use in Mr. Kettell's DCF. However, Mr. McGarry was not aware that in MPSC U-18802, the renewable energy plan accounts for DFIT of approximately 11%.[229] Mr. McGarry agreed that the average rate base (WACC) is affected. Mr. McGarry was not aware of the

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[228] Respondent's Exhibit 1 at 25-26.
[229] Respondent's Exhibit 4, Lines 20-23, at 688 (Tr. 4 at 733.)

reason that DTE's WACC is much higher than Consumer's Energy. Mr. Kettell utilized the net plant in service calculations from Mr. McGarry. The Tribunal notes that DTE's DFIT (approximately 11%) is not included in the pre-tax WACC.[230] The ending point of Mr. McGarry's calculation of the plant in service is a miscalculation carried over to the beginning of Mr. Kettell's DCF as his net plant in service is the first input.

The average rate base is the beginning point, and depreciation is deducted, CWIP is added, REC inventory and ITC are added for the net plant, and then the accumulated deferred income taxes are deducted from the net plant. This equals the Net Rate Base. DTE's deferred income tax is approximately 11% of the Plant in Service rate. This error substantially reduces Respondents' (net plant in service) as utilized by Mr. Kettell. This issue on its own substantially reduced the estimated TCV.

One of the other differences in the DCF is the projection and holding period that both parties utilized. Petitioner selected a ten-year projection with mid-year conventions; Respondents utilized 27 years (estimated as the remaining effective years). Respondents' estimated life was discussed earlier and found to be 25.5 years based on information known and knowable as of the tax dates at issue.

Respondents also explain the process for utilities to recover the costs associated with compliance of PA 295:

> The PA 295 "transfer price schedule" is the price that a utility would pay for energy and capacity generated from traditional "non-renewable electric power plants under a long-term power purchase agreement. The surcharge for the "remaining or incremental costs" is for the cost of renewable energy plants in excess of those costs covered by the transfer price schedule.[231]

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[230] Petitioner's Exhibit 102 at 1.
[231] Respondent's Exhibit 1 at 19.

Respondents considered *TES Filer City Station v Township of Filer* (MTT Docket 192208), in which Petitioner states that the opinion expressed that the case was one of highest and best use, as a PURPA, based upon PPAs. This is a case of a regulated utility and should be appraised as such. Respondents made it clear that "we're making the assumption that it would be someone that would operate the Sigel Wind Park - under PA 295, would operate that facility as a regulated facility."[232]

The appraiser usually estimates a projection period that is consistent with investor expectations developed through surveys and interviews. In the selection of an appropriate projection period, the appraiser should consider lease expirations, vacancies, rollovers, anticipated capital improvements, and other atypical events that may cause cash flow aberrations. Risk increases as the projection period of an investment increases due to:

> Maintenance costs increase as a building age.
> Remaining economic life declines as a building ages.
> Functional issues relating to completion from newer properties may force a property into a lower investment category.
> In general, as forecasts look farther into the future, the conclusion becomes less certain.[233]

Mr. Kettell recreated Mr. Reilly's sensitivity DCF analysis of obsolescence utilizing Petitioner's 7.4% capitalization rate and 42.7% capacity factor.[234] He found that a 55.9% capacity factor would be necessary to result in no obsolescence.

Mr. Kettell indicated that two primary factors that affect production are taller turbines with longer blades and higher wind speed due to elevation. Having better

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[232] Tr. 6 at 1,213.
[233] Appraisal Institute, *The Appraisal of Real Estate* (Chicago: Appraisal Institute, 14th ed, 2013), at 512.
[234] Respondent's Exhibit 90 at 001; Petitioner's Exhibit 23.

computer controls for blade pitch during varying wind speeds is also a production factor.

Berkeley Lab projected capacity factors for projects constructed in 2015 which indicate

that, at the highest wind speed areas, the average capacity is 49%. The subject is in a

medium wind capacity area where the average capacity factor is 39%. Mr. Kettell

opined that 39% is close to Sigel's capacity factor of 42% which indicates no functional

obsolescence.[235] Respondents' DCF analysis results in a value as of December 31,

2015, of $123,200,000, and the resulting value as of December 31, 2016, is

$119,000,000. Respondents suggest an increase above the multipliers that Mr. Kettell

developed for MERC. The subject properties are classed as industrial personal

property. It is an extremely rare instance when personal property increases in value.

Personal property by virtue of its nature depreciates based upon its life expectancy

which is generally lower than real property.

Dr. Heaton critiqued Respondents' income analysis and information. Some

changes were suggested to correct some misperceptions and correct multiple issues

with Respondents' DCF. Mr. Kettell confuses the asset with the owner in determining

the size premium. A size premium in the micro-cap deciles for the modified dividend

growth model should be 5.6. The subject property is a small stand-alone wind park, not

the entirety of its owner DTE. The subject's illiquidity is inadequate compared to the sale

of a stock that is accomplished in minutes, the wind park not so much. It would take

longer to sell; therefore, Respondents' liquidity discount is too low. The DCF indicates

growth is 7% for the first ten years, then 2%. However, the explanation shows a 4%

higher growth. The subject should not have lower growth than inflation or less than the

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[235] Respondent's Exhibit 1 at 84.

gross national product.[236] The suggested 5.6% added to the 10.73 dividend growth

model is the cost of equity at 15.2%.[237]

This Tribunal has considered the changes for a result much different than the

actual appraisals.[238] The Tribunal finds that neither parties' DCF analysis is considered

to be reflective of the subject's TCV for the reasons above. The sales comparison

approach was considered by both parties. They both considered Pheasant Run Wind 2,

however, it was only one sale and neither party had any public underlying information

for the sale. It had a base purchase price for 100% of its outstanding membership

interest pursuant to an Option Agreement dated April 2013. DTE was the purchaser of

the 75 MW Wind Park, pursuant to a confidential agreement. Respondent utilized

$2,094,400 per MW as similar to the subject property. The question of whether one sale

price equates to market value was not answered. The Tribunal finds the sales

comparison approach was also considered; however, one relevant sale in this case

does not make it market. The cost approach was relied upon by both parties. The

Tribunal finds both of the cost approaches were sufficiently flawed to be of no

assistance in determining the TCV of the subject properties.

Petitioner properly filed 40 individual personal property statements utilizing STC

Form L-4565 for Wind Turbine Valuation Statement according to Petitioner's witness,

Mr. Yee. He testified that the STC guidelines were followed when reporting the personal

property. He presented the differences between the STC depreciation tables and the

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[236] Respondent's Exhibit 1 at 58-59.
[237] Petitioner's Exhibit 107.
[238] It is noted that creating the DCF calculations and ensuing corrections by this Tribunal were laborious and time consuming to result in the final analysis. The offer to submit live DCF and corrections would have been accepted with gratitude. However, would not have changed the results in the final determination.

depreciation tables utilized by the assessors and the assessor's change notices that
appear to use non-conforming tables.

Mr. Yee discussed the differences between the STC multipliers for Wind Energy
and the rate table used by the assessors. One discrepancy is that the assessor included
FAA lights as an addition every year. New lights are not added every year or replaced.
When a new gearbox is added, there is no corresponding loss for the old one from the
assessor. Mr. Yee admitted that he did not contact the assessor about the issues. Mr.
Yee is remiss in calling the assessor and questioning the additions.

Mr. Kettell testified that he provided depreciation tables to Clark Hill and believes
they also represent MERC, Michigan Renewable Energy Collaborative. He is not aware
of the assessors that use his depreciation tables. He generated the tables about four
years ago or so. It was a mass appraisal technique for the valuation of wind park
property. He used the cost and replacement costs data from government filings,
considering functional and economic obsolescence.

Mr. Kettell explained no analysis was done for base rates for the tables. He is not
aware of whether a specific township is utilizing his mass appraisal guide or whether the
values from his valuation disclosure are higher than the values from the tables.[239] The
Tribunal notes that Mr. Kettell found no functional or economic obsolescence in the
subject property in the cost, sales, or income approaches.

Both Petitioner and Respondents presented calculations for the 2016 and 2017
personal property statements. Mr. Yee explained the subject properties' personal
property statements from each Township for 2016 and 2017 and compared the

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[239] Tr. 6 at 1,128-1,129.

multipliers utilized by the STC with the Appraisal Economics' multipliers used by

Respondent's assessors.[240] Mr. Yee testified regarding the different TCVs derived by

DTE's filing versus the assessor's calculations for parcel 3202-900-102-00. For 2016,

the DTE filing determined this parcel's TCV was $2,334,019, using the STC multipliers,

and the TV was $1,167,010. The assessor's calculation, using the Appraisal Economics

tables was a TCV of $2,617,435 and a TV of $1,308,718. This resulted in a TCV

increase of $283,069 and a TV increase of $141,708 for this parcel. The Tribunal notes

that 2016 parcels did not have any additions. The six parcels that had additions and

resulting losses were also presented.

The Tribunal presents the following using $3,303,180 (the cost of turbine with

computer) in personal property for each year as an example of the difference between

the STC multipliers and Mr. Kettell's multipliers that the assessors have been using that

result in additional value:

Year	STC	Mr. Kettell's	STC	Mr. Kettell	Percentage	$ Difference
1	1.00	0.991	$3,303,180	$3,273,451	0.99	-$29,729
2	0.80	0.906	$2,642,544	$2,992,681	1.13	$350,137
3	0.75	0.820	$1,981,908	$2,708,608	1.37	$726,700
4	**0.70**	**0.777**	$1,387,336	$2,566,571	**1.85**	$1,179,235
5	**0.60**	**0.743**	$832,401	$2,454,263	**2.95**	$1,621,861
6	0.50	0.673	$416,201	$2,223,040	5.34	$1,806,839
7	0.45	0.618	$187,290	$2,041,365	10.90	$1,854,075
8	0.40	0.569	$74,916	$1,879,509	25.09	$1,804,593
9	0.35	0.525	$26,221	$1,734,170	66.14	$1,707,949
Prior	0.30	0.470	$7,866	$1,552,495	197.36	$1,544,628

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[240] See Tr. 8 at 1,487-1,490.

The resulting increase in value between Mr. Kettell's unapproved multipliers and the use of STC Form 4565 results in excessive TCV. This issue is a significant difference. The use of the proper multipliers may have resulted in a settlement or a lower value in contention. In addition, the Tribunal is puzzled at the difference between SEV and TV for personal property. Generally, personal property depreciates every year, notwithstanding any "new" personal property, resulting in the SEV and TV being the same number. The addition of the new replacement personal property has a corresponding loss of the item being replaced, again, resulting in the SEV and TV being equal.

Petitioner's counsel argued that this is not a "multiplier case." However, the Tribunal has explained above why the parties' other approaches to value are not reliable. Therefore, the Tribunal finds that the valuation of the subject properties comes down to the issue of which multipliers are appropriate to be applied to the subject wind turbines.

The use of non-approved STC depreciation tables is, however, the only other method remaining for the Tribunal to utilize in determining the TCV of the subject properties. The Tribunal finds that generally, the assessor's use of non-approved depreciation tables would be a jurisdictional matter for the STC. However, as a component of this appeal of the TCV of the subject property, the Tribunal is left considering Mr. Kettell's testimony that he generated the table possibly four years ago. He was not aware of which townships used the multiplier table that he created.

Respondents' depreciation tables were utilized by the assessors in Bloomfield

and Sigel Townships and resulted in a higher TCV.[241] This Tribunal is reluctant to

accept Mr. Kettell's multipliers after considering the number of errors and corrections

made to the DCF and the cost approach, and, thus, gives his multipliers no weight. The

Tribunal believes these multipliers have resulted in overvaluing the subject properties.

Respondent had no basis to create its own, unsubstantiated multipliers given that

the STC, an entity with general supervision of the administration of the Property Tax

Laws in Michigan, created and mandated the use of wind turbine multipliers.

The Tribunal has considered the 2016 and 2017 personal property statements

and the resulting values according to Respondents' Attachment A to the Prehearing

Statement; the 40 statements have been recalculated to include the computer with the

turbine as it is an intricate part. This increases the 2012 original costs (Form 4565) to

$3,303,180 and deducts the $62,444 found in Form 632, page 2 Section F in 2012 to

zero. This resulted in reductions for 2016 In addition to the six properties that have

additions for tax year 2017.

The property's' TCV by the Board of Review was the beginning point; 2016

personal property statements were calculated utilizing both the STC and Mr. Kettell's

multipliers.[242] The STC multipliers resulted in a value similar to the results when the

Tribunal's corrections were in place of the cost approaches as well as Respondent's

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[241] Petitioner's Exhibit 18, as testified to by Mr. Yee.
[242] The personal property valuation multipliers differ from depreciation tables in several ways. They seek to adjust from historic cost new to an indication of current market value, rather than simply apportioning the historic cost over the periods benefited, they reflect the current value of the periodic survivors of the original group rather than apportioning the loss of value of the original members of the group and they recognize the potential influence of changes in replacement cost and of normal obsolescence consistent with the age of the property.

DCF. The STC multipliers are substantially easier to calculate and comprehend for local units of government.

The Tribunal finds that the TCV of the subject properties are based upon the appropriate STC multipliers as found on Form 4565. It is noted that some parcels had TVs less than the SEVs. It is unknown how these parcels' TVs were calculated or if an inflation multiplier was improperly applied. The Tribunal finds that the December 31, 2015 cumulative TCV is $94,693,300 and the December 31, 2016 cumulative TCV is $82,538,200. The values for the individual parcels are in Attachment 2 and Attachment 3. Based upon the Findings of Fact and the Conclusions of Law set forth herein, the Tribunal finds that the subject property's TCV, SEV, and TV for the tax years at issue are as stated in the addendum.

<div align="center">JUDGMENT</div>

IT IS ORDERED that the property's SEV and TV for the tax year(s) at issue are MODIFIED as set forth in the Introduction section of this Final Opinion and Judgment.

IT IS FURTHER ORDERED that the officer charged with maintaining the assessment rolls for the tax years at issue shall correct or cause the assessment rolls to be corrected to reflect the property's true cash and taxable values as finally shown in this Final Opinion and Judgment within 20 days of the entry of the Final Opinion and Judgment, subject to the processes of equalization. See MCL 205.755. To the extent that the final level of assessment for a given year has not yet been determined and published, the assessment rolls shall be corrected once the final level is published or becomes known.

IT IS FURTHER ORDERED that the officer charged with collecting or refunding

the affected taxes shall collect taxes and any applicable interest or issue a refund within

28 days of entry of this Final Opinion and Judgment. If a refund is warranted, it shall

include a proportionate share of any property tax administration fees paid and penalty

and interest paid on delinquent taxes. The refund shall also separately indicate the

amount of the taxes, fees, penalties, and interest being refunded. A sum determined by

the Tribunal to have been unlawfully paid shall bear interest from the date of payment to

the date of judgment, and the judgment shall bear interest to the date of its payment. A

sum determined by the Tribunal to have been underpaid shall not bear interest for any

time period prior to 28 days after the issuance of this Final Opinion and

Judgment. Pursuant to MCL 205.737, interest shall accrue (i) after December 31, 2009,

at the rate of 1.23% for calendar year 2010, (ii) after December 31, 2010, at the rate of

1.12% for calendar year 2011, (iii) after December 31, 2011, through June 30, 2012, at

the rate of 1.09%, (iv) after June 30, 2012, through June 30, 2016, at the rate of 4.25%,

(v) after June 30, 2016, through December 31, 2016, at the rate of 4.40%, (vi) after

December 31, 2016, through June 30, 2017, at the rate of 4.50%, (vii) after June 30,

2017, through December 31, 2017, at the rate of 4.70%, (viii) after December 31, 2017,

through June 30, 2018, at the rate of 5.15%, (ix) after June 30, 2018, through December

31, 2018, at the rate of 5.41%, (x) after December 31, 2018 through June 30, 2019, at

the rate of 5.9%, (xi) after June 30, 2019 through December 31, 2019, at the rate of

6.39%, (xii) after December 31, 2019, through June 30, 2020, at the rate of 6.40%, (xiii)

after June 30 2020, through December 31, 2020, at the rate of 5.63%, and (xiv) after

December 31, 2020, through June 30, 2021, at the rate of 4.25%.

This Final Opinion and Judgment resolves all pending claims in this matter and closes this case.

APPEAL RIGHTS

If you disagree with the final decision in this case, you may file a motion for reconsideration with the Tribunal or a claim of appeal with the Michigan Court of Appeals.

A motion for reconsideration must be filed with the Tribunal with the required filing fee within 21 days from the date of entry of the final decision. Because the final decision closes the case, the motion cannot be filed through the Tribunal's web-based e-filing system; it must be filed by mail or personal service. The fee for the filing of such motions is $50.00 in the Entire Tribunal and $25.00 in the Small Claims Division, unless the Small Claims decision relates to the valuation of property and the property had a principal residence exemption of at least 50% at the time the petition was filed or the decision relates to the grant or denial of a poverty exemption and, if so, there is no filing fee. You are required to serve a copy of the motion on the opposing party by mail or personal service or by email if the opposing party agrees to electronic service, and proof demonstrating that service must be submitted with the motion. Responses to motions for reconsideration are prohibited and there are no oral arguments unless otherwise ordered by the Tribunal.

A claim of appeal must be filed with the Michigan Court of Appeals with the appropriate filing fee. If the claim is filed within 21 days of the entry of the final decision, it is an "appeal by right." If the claim is filed more than 21 days after the entry of the final decision, it is an "appeal by leave." You are required to file a copy of the claim of

appeal with filing fee with the Tribunal in order to certify the record on appeal. The fee

for certification is $100.00 in both the Entire Tribunal and the Small Claims Division,

unless no Small Claims fee is required.

By _*Victoria K. Enyart*_

Entered: June 11, 2021

ATTACHMENT 1

GLOSSARY OF TERMS & ACRONYMS

AEO: Annual Energy Outlook

Appraisal Economics: mass appraisal table provided to a group of assessors called **MREC**: an association of tax jurisdictions that have wind property.

Arithmetic Mean: All of the numbers are added and then divided by the number of inputs.

Geometric Mean: the inputs are multiplied, then the number of inputs are considered in the square root of the total. It only produced positive numbers and is always less than the arithmetic mean.

ASM: Ancillary Service Market

BETA: A measure of specific company's stock price volatility or systematic risk of the overall market composite index. -1 reflects that the stock will be less volatile (less risky) than the overall market. +1 is an indication of more volatile or riskier. Exact 1 equals the same risk as the overall market.

BETA is calculated "from a regression analysis of the relationship between weekly percentage changes in the price of a stock and weekly changes in the New York Stock Exchange. Composite Index over a five year period.

BEV: Business Enterprise Value

CAPEX: Capital Expenditures

CAPM: Capital Asset Pricing Model

CASH GRANT: (Job Creation Act 2010) Tax relief Unemployment Insurance & Job **Creation Act of 2010 extended**: Sec 1603 Federal Treasury Grant Program extended January 3, 2012. This allowed wind developers to accept cash grant equivalent to 30% of the qualified assets from the Federal Government in lieu of an Investment Credit. Ir does not transfer to future owners akin to ITC unlike to PTC money already spent by current owner.

CCGT: Combined Cycle Gas Turbine

Consolidated Appropriations Act, 2016 prior to the extension: the ITC program expired 12/31/14 – CAA was applied retroactively to January 1, 2015. Qualified wind projects that started construction at any point in 2016 to 12-31-16 were eligible to claim 100% of ITC incentive, if elected. PA 27 FN 14

CT: Combustion Turbine

CWIP: Construction Work in Progress

DCF: Discounted Cash Flow

DFIT: Deferred Federal Income Taxes

DEPARTMENT OF ENERGY WIND TECHNOLOGIES (Report)

DOE: US Department of Energy

EBIT: Earnings before interest and taxes.

EBITDA: Earnings Before Income Taxes, Depreciation, and amortization. (Income)

EIA: Energy Information Administration (Part of DOE)

EO: Economic Obsolescence

EP ACT: Energy Policy Act of 1992

ERO: Electric Reliability Organization

FERC: Federal Energy Regulatory Commission
FO: Functional Obsolescence
ITC: Business Energy Investment Tax Income tax credit of 30% of total qualified money of qualifying plants (including wind) (Also see Consolidated Appropriations Act of 2016) PA 27 and Respondent's Exhibit 17(one of three tax credits)[243]
INTERNATIONAL TRANSMISSION COMPANY owns the transmission system. (transmission lines are no longer owned by distribution utilities) resulting in a competitive market for electric power plants.
IPP: Independent Power Procurer
ISO: Independent System Operator
kWh: Kilowatt Hour
LCOE: Levelized Cost of Energy
LMP: Locational Marginal Pricing
MACRS: Modified Accelerated Cost Recovery System
MISO: Mid-Continent Independent System Operator
MPSC: Michigan Public Service Commission
MW: Megawatt
MWh: Megawatt Hour
NERC: North American Electric-Reliability Corporation
NREL: National Renewable Laboratory (Department of Energy publication)
NUG: Non-Utility Generator
O&M: Operations and Maintenance
OASIS: Open Access Same Time Information System
OATT: Open Access Transmission Tariff
OTC: Global Holdings
PA 295 required utilities to acquire REC as of December 31, 2015
PD: Physical Deterioration
PPA: Power Purchase Agreement a contract between power generator to sell energy to a 3rd party (i.e. electric utility) Terms, dates, prices Schedule for energy delivery penalties, and termination date. Provides stable long term revenue, eliminates price volatility. P 29-30 Subject property has NO PPA
PRA: Planned Resource Adequacy
PSCR: Power Supply Cost Recovery allows renewable Energy to be recovered thru PSCR is transfer price schedule for energy and capacity portion Made public two times a year Or a surcharge for the costs above PSCR
PTC: Production Tax Credit Renewable Energy Production from (wind) with qualified facility and sold to an unrelated party. Available for 10 years after facility is in service (one of three tax credits) Subject chose this tax credit. Goes with the property when it sells the remaining years on PTC transfers to new owner. (six or seven years remaining depending on when purchased)
PA 27
PURPA: Public Utility Regulatory Policies Act

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[243] Both the ITC and PTC reduce annual income tax liability. ITC is limited to 30% of qualified plants. PTC is 10-years The subject elected PTC. In 2018 it is $0.024 for each KWh of production ($5,744,568). Petitioner's Exhibit 1 at 27, 76. Respondent's Exhibit 1 at 17

RCN: Replacement Cost New

RCNLD: Replacement Cost New less depreciation

REC: Renewable Energy Credit

RECs: Renewable Energy Certificates - 1 REC for every MWh can be sold in the market Part of each states (MI see PA 295 Generate 10% from renewable by 2015 & increases to 12.5% by 2019)

REG: Renewable Energy Goal

RES: Renewable Energy Standard (PA 295)

RPS: Renewable Portfolio Standard

SNL Energy: SNL Financial

SPPA: Synthetic PPA, Similar to PPA – sells power to wholesale market. Eliminates price volatility via hedge provider but still sells into wholesale market. SPPA is structured around a strike price for energy and a volume of energy in MWh IF PPA cannot be entered into.

Transfer Price Schedule: the price utility would pay for energy & capacity generated from traditional non-renewable electric power plants under PPA, excess of costs covered by transfer price schedule.

USPAP: Uniform Standards of Professional Appraisal Practice

WACC: Weighted Average Cost of Capital

WC: Working Capital. The difference between liquid assets (cash & cash equivalent) also known as current asset's, short-term accounts payable – known as current liabilities that must be on hand to allow a business to operate. It is a component of the BEV of businesses % of Annual Revenue P@ 511603 Cash Grant (expired 12-31-2012) instead of tax credit a check from treasury for 30% of the cost in lieu of tax credits (due to recession) (one of three tax credits)

ATTACHMENT 2 **Recalculated w STC or 0.90**
TAX YEAR ENDING: DECEMBER 31, 2015

Township	Parcel Number	TCV per Board of Review	AV per Board of Review	TV per Board of Review	TCV Recalc MTT	SEV Recalc MTT	TV Recalc MTT
Bloomfield	3202-900-101-00	$2,854,060	$1,427,000	$1,427,000	$2,568,700	$1,284,300	$1,284,300
Bloomfield	3202-900-102-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-103-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-104-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-105-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-106-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-107-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-108-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-109-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-111-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-112-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-113-00	$2,782,928	$1,391,500	$1,391,500	$2,362,800	$1,181,400	$1,181,400
Bloomfield	3202-900-114-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-115-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-116-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Bloomfield	3202-900-117-00	$2,617,435	$1,308,700	$1,308,700	$2,362,700	$1,181,300	$1,181,300
Dec-31-15	Total Bloomfield	$42,281,078	$21,140,300	$21,140,300	$38,009,300	$19,003,900	$19,003,900

ATTACHMENT   2   Recalculated w STC or 0.90

TAX YEAR ENDING: DECEMBER 31, 2015

Township	Parcel Number	TCV per Board of Review	AV per Board of Review	TV per Board of Review	TCV Recalc MTT	SEV Recalc MTT	TV Recalc MTT
Sigel	3226-900-118-00	$2,617,435	$1,308,700	$1,222,524	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-119-00	$2,617,435	$1,308,700	$1,213,963	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-120-00	$2,617,435	$1,308,700	$1,213,963	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-121-00	$2,617,435	$1,308,700	$1,213,963	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-122-00	$2,617,435	$1,308,700	$1,211,925	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-123-00	$2,617,435	$1,308,700	$1,201,262	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-124-00	$2,617,435	$1,308,700	$1,209,786	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-125-00	$2,617,435	$1,308,700	$1,210,805	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-126-00	$2,617,435	$1,308,700	$1,206,117	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-127-00	$2,617,435	$1,308,700	$1,201,262	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-128-00	$2,617,435	$1,308,700	$1,288,150	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-129-00	$2,617,435	$1,308,700	$1,250,955	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-130-00	$2,617,435	$1,308,700	$1,218,753	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-131-00	$2,617,435	$1,308,700	$1,207,952	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-132-00	$2,617,435	$1,308,700	$1,218,753	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-133-00	$2,617,435	$1,308,700	$1,292,736	$2,362,700	$1,181,300	$1,181,300
Sigel	3226-900-134-00	$2,614,471	$1,307,200	$1,239,643	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-135-00	$2,614,471	$1,307,200	$1,252,993	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-136-00	$2,614,471	$1,307,200	$1,246,805	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-137-00	$2,614,471	$1,307,200	$1,250,446	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-138-00	$2,614,471	$1,307,200	$1,277,962	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-139-00	$2,614,471	$1,307,200	$1,305,067	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-140-00	$2,614,471	$1,307,200	$1,222,116	$2,360,100	$1,180,000	$1,180,000
Sigel	3226-900-141-00	$2,614,471	$1,307,200	$1,209,542	$2,360,100	$1,180,000	$1,180,000
Dec-31-15	Total Sigel	$62,794,728	$31,396,800	$29,587,443	$56,684,000	$28,340,800	$28,340,800

Dec-31-15	Total Both	$105,075,806	$52,537,100	$50,727,743	$94,693,300	$47,344,700	$47,344,700

TAX YEAR ENDING: DECEMBER 31, 2016

Township	Parcel Number	TCV per Board of Review	AV per Board of Review	TV per Board of Review	TCV MTT	SEV MTT	TV MTT
Bloomfield	3202-900-101-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-102-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-103-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-104-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-105-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-106-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-107-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-108-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield *	3202-900-109-00	$2,671,052	$1,335,500	$1,335,500	$2,232,500	$1,116,200	$1,116,300
Bloomfield	3202-900-111-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-112-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield*	3202-900-113-00	$2,649,834	$1,324,900	$1,324,900	$2,400,000	$1,181,400	$1,181,400
Bloomfield	3202-900-114-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-115-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-116-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Bloomfield	3202-900-117-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Dec-31-16	Bloomfield Total	$40,388,730	$20,194,000	$20,194,000	$33,084,700	$16,523,000	$16,523,100

Attachment 3   Page155

Attachment   **3 Recalculated**   **With STC**   **or .081**

TAX YEAR ENDING: December 31, 2016

Township	Parcel Number	TCV per Board of Review	AV per Board of Review	TV per Board of Review	TCV MTT	SEV MTT	TV MTT
Sigel	3226-900-118-00	$2,504,846	$1,252,400	$1,233,526	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-119-00	$2,504,846	$1,252,400	$1,224,888	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-120-00	$2,504,846	$1,252,400	$1,224,888	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-121-00	$2,504,846	$1,252,400	$1,224,888	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-122-00	$2,504,846	$1,252,400	$1,222,832	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-123-00	$2,504,846	$1,252,400	$1,212,073	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-124-00	$2,504,846	$1,252,400	$1,220,674	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-125-00	$2,504,846	$1,252,400	$1,221,702	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-126-00	$2,504,846	$1,252,400	$1,216,972	$2,032,300	$1,016,100	$1,016,100
Sigel*	3226-900-127-00	$2,504,846	$1,252,400	$1,212,073	$2,032,300	$1,016,100	$1,016,100
Sigel*	3226-900-128-00	$2,865,354	$1,432,700	$1,432,700	$2,200,000	$1,087,900	$1,087,900
Sigel	3226-900-129-00	$3,018,718	$1,509,400	$1,509,400	$2,450,000	$1,212,300	$1,212,300
Sigel	3226-900-130-00	$2,504,846	$1,252,400	$1,229,721	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-131-00	$2,504,846	$1,252,400	$1,218,823	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-132-00	$2,504,846	$1,252,400	$1,229,721	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-133-00	$2,504,846	$1,252,400	$1,252,400	$2,032,300	$1,016,100	$1,016,100
Sigel	3226-900-134-00	$2,502,163	$1,251,100	$1,250,799	$2,026,800	$1,013,400	$1,013,400
Sigel	3226-900-135-00	$2,502,163	$1,251,100	$1,251,100	$2,026,800	$1,013,400	$1,013,400
Sigel	3226-900-136-00	$2,502,163	$1,251,100	$1,251,100	$2,026,800	$1,013,400	$1,013,400
Sigel	3226-900-137-00	$2,502,163	$1,251,100	$1,251,100	$2,026,800	$1,013,400	$1,013,400
Sigel	3226-900-138-00	$2,502,163	$1,251,100	$1,251,100	$2,026,800	$1,013,400	$1,013,400
Sigel*	3226-900-139-00	$2,502,163	$1,251,100	$1,251,100	$2,026,800	$1,013,400	$1,013,400
Sigel	3226-900-140-00	$2,605,090	$1,302,500	$1,249,521	$2,188,700	$1,094,300	$1,094,300
Sigel	3226-900-141-00	$2,502,163	$1,251,100	$1,220,427	$2,026,800	$1,013,400	$1,013,400
Dec-31-16	**Total Sigel**	**$61,072,147**	**$30,535,900**	**$30,063,528**	**$49,478,500**	**$24,713,700**	**$24,713,700**

| **Dec-31-16** | **Total Both** | **$101,460,877** | **$50,729,900** | **$50,257,528** | **$82,563,200** | **$41,236,700** | **$41,236,800** |

Note

Bloomfield *	3202-900-109-00	$330,614 new $217,256 2012 loss
Bloomfield*	3202-900-113-00	$318,534 new $438,095 2012 loss
Sigel*	3226-900-127-00	$363,782 new $367,156 2012 Loss
Sigel*	3226-900-128-00	$518,539 new $210,454 2012 Loss
Sigel*	3226-900-139-00	$379,136 new $367,155 2012 Loss

Attachment 3   Page 156

GRETCHEN WHITMER
GOVERNOR

ORLENE HAWKS
DIRECTOR

DTE Electric Company,
    Petitioner,

MICHIGAN TAX TRIBUNAL

v

MOAHR Docket No. 16-003995

Bloomfield Township,
Sigel Township,
    Respondent.

<u>Presiding Judge</u>
Victoria L. Enyart

CORRECTED FINAL OPINION AND JUDGMENT

The Tribunal has reviewed the file in the above-captioned case and finds that it issued a Final Opinion and Judgment on June 11, 2021. The Tribunal erred in the entry of the Final Opinion and Judgment, as it stated that the hearing was held on September 12-24, 2020. The hearing in this matter was held on September 12-24, 2019. Therefore,

IT IS ORDERED that the Final Opinion and Judgment is CORRECTED to state that the hearing was held on September 12-14, **2019**. The remainder of the Final Opinion and Judgment is not corrected.

This Final Opinion and Judgment resolves all pending claims in this matter and closes this case.

APPEAL RIGHTS

If you disagree with the final decision in this case, you may file a motion for reconsideration with the Tribunal or a claim of appeal with the Michigan Court of Appeals.

A motion for reconsideration must be filed with the Tribunal with the required filing fee within 21 days from the date of entry of the final decision. Because the final decision closes the case, the motion cannot be filed through the Tribunal's web-based e-filing system; it must be filed by mail or personal service. The fee for the filing of such motions is $50.00 in the Entire Tribunal and $25.00 in the Small Claims Division, unless the Small Claims decision relates to the valuation of property and the property had a principal residence exemption of at least 50% at the time the petition was filed or the decision relates to the grant or denial of a poverty exemption and, if so, there is no filing fee. You are required to serve a copy of the motion on the opposing party by mail or personal service or by email if the opposing party agrees to electronic service, and proof demonstrating that service must be submitted with the motion. Responses to motions for reconsideration are prohibited and there are no oral arguments unless otherwise ordered by the Tribunal.

A claim of appeal must be filed with the Michigan Court of Appeals with the appropriate filing fee. If the claim is filed within 21 days of the entry of the final decision, it is an "appeal by right." If the claim is filed more than 21 days after the entry of the final decision, it is an "appeal by leave." You are required to file a copy of the claim of appeal with filing fee with the Tribunal in order to certify the record on appeal. The fee for certification is $100.00 in both the Entire Tribunal and the Small Claims Division, unless no Small Claims fee is required.

By _Victoria L. Enyart_

Entered: June 11, 2021
wmm