Outline for Report on Rate Design for Distributed Energy Resources

Regulatory Assistance Project for the Michigan Public Service Commission

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1. Introduction/Executive Summary

2. Background and Regulatory Context in Michigan
   a. Overview of electricity market structure and utility regulation in Michigan
   b. History of rates and distributed generation (DG) compensation policies in Michigan
      i. Full retail rate net metering with monthly netting and rollover starting in 2008 through phaseout for new customers in 2019-2020
      ii. DG program tariff framework
      iii. Rate case orders and DG program implementation
   c. Brief survey and statistics on DER by technology type in Michigan, including which tariffs they are on
   d. Future directions for the electric system and utility regulation

3. Ratemaking principles and perspectives on costs and benefits
   a. Traditional ratemaking principles
   b. Broader policy goals
   c. Cost causation on the electric system
   d. Cost-benefit tests
   e. Cost of service frameworks

4. Overarching program parameters
   a. Metering and billing frameworks
      i. Monthly netting
      ii. Buy all-credit all, including stand-alone distributed generation
      iii. Inflow/outflow
      iv. Time-of-use netting
      v. Granular netting options using AMI
   b. Other program/tariff design features
      i. Program and tariff eligibility
      ii. Customer class definitions and rate eligibility
      iii. Treatment of renewable energy credits (RECs) for REC-eligible technologies
      iv. Recovery of program costs and non-bypassable rate elements
   c. Treatment of pre-existing net metering and DG program customers
   d. Process, analysis, and pilots

5. Designing Rates and Credits
    a. Designing retail rates
        i. Fixed charges
            1. Monthly customer charges
            2. System access charges
            3. Minimum bills
        ii. kWh charges
            1. Flat kWh rate
            2. Time-of-use rates
            3. Critical peak pricing and peak-time rebates
            4. Real-time pricing
            5. Bidirectional kWh rates
        iii. Individual maximum kW charges and other forms of demand charges
            1. Traditional billing period individual non-coincident peak (NCP) demand charge
            2. "Peak window" NCP demand charge
            3. Daily-as-used demand charge
            4. Standby charge
            5. Contract demand charge
    b. Designing credits
        i. Crediting mechanisms
            1. Volumetric – defined in kWh units, but can be a % of kWhs
            2. Monetary – defined in $ terms
        ii. Methods for setting export credits
            1. Linked to retail rates
                a. Flat or time-varying
                b. Which components to include?
            2. Valuation-based
                a. Flat or time-varying
                b. Which values to include?
            3. Policy-based credits
                a. Market transition credit
                b. Community credit
        iii. Rollover Provisions/Restrictions
6. Evaluating Comprehensive Program Designs and Options to Consider
    a. Key evaluation metrics
        i. Fair cost allocation
        ii. Efficient customer pricing signals
        iii. Customer understanding and acceptance
        iv. Equitable distribution of program benefits
        v. Levels of DER buildout
    b. Options to construct new rate designs for distributed energy resources
        i. [To be determined]
7. Appendices with one-pagers on key state examples
    a. [To be determined]