BetterBuildings Information System (BBIS)

Logical Data Model and Data Dictionary Document

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U.S. Department of Energy

Office of Energy Efficiency and Renewable Energy

Revision History

Date	Version	Description	Author
10/05/2010	0.1	Initial Draft	Booz Allen Hamilton
10/24/2010	0.5	Major Updates/Revisions	Booz Allen Hamilton
10/28/2010	0.6	Minor Updates	Booz Allen Hamilton
11/02/2010	0.7	Minor Updates	Booz Allen Hamilton
11/19/2010	1.0	Updates based on reviews	Booz Allen Hamilton
02/10/2010	2.0	Updates based on Data Model Changes	Booz Allen Hamilton
03/16/2010	3.0	Updates based on design changes	Booz Allen Hamilton

Change Control for this Document

During the course of the BetterBuildings Program, the Web portal functional requirements document (FRD) for the BetterBuildings Information System (BBIS) application is subject to review and update by the DOE IT Team and Project Manager (PM). Review and update will take place when any of the following situations occur:

- Modifications in response to comments or change requests, if any, received from the BetterBuildings Program (BBP) core team, made within ten working days of delivery of this deliverable to DOE
- Changes in project scope or management processes
- Identification of process improvement activities after approval
- Identification of activities determined to be critical by either the Project Manager (PM) or BBP core team after approval of this document
- Changes in tools and techniques

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0.1 INTRODUCTION

The Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) launched the BetterBuildings Program in 2009 to accelerate the formation of a self-sustaining retrofit marketplace. This program has been designed to encourage communities, state and local governments, private-sector companies, and non-profit organizations to work together on pioneering programs that deliver energy efficiency improvements across neighborhoods throughout the United States. The Program oversees the distribution and management of $487M in competitive grants. To manage the large volume of data, BetterBuildings is developing a national retrofit program database called the BetterBuildings Information System (BBIS). BBIS will collect, process, and distribute data from and to BBP stakeholders and is a high priority and high visibility initiative. The requirements for BBIS are outlined in four documents: Web Portal Functional Requirements Document; Reporting and Dashboard Requirements Document, Technical Architecture Document, and Logical Data Model and Data Dictionary Document. This document is the Logical Data Model and Dictionary Document.

0.2 Purpose

The Logical Data Model and Dictionary Document includes the logical data model and the data dictionary, which in combination allow the Vendor to construct the physical data model.

0.3 Scope

The Logical Data Model shows the specific entities, attributes and relationships involved in BBIS. The data dictionary describes the metadata information of the data elements and is the basis for the creation of the physical data model.

0.3.1 Out of Scope

The following functionality is explicitly not within the scope of Logical Data Model and Data Dictionary:

- Physical data model and table definitions are not part of this document
- Required data warehouse and data mart design patterns are not defined in this document
- Data models other than BetterBuildings. BetterBuildings data sheet (C_BB_Data_Requirements_Workbook_10_6_10-final) is the Main source of input for the initial design of the Logical Data Model.

0.4 Definition

0.4.1 BetterBuildings Program (BBP or Program)

The BetterBuildings Program, referred to as Program or BBP, is the Department of Energy's program for managing $487M in competitive grants to deliver energy efficiency improvements across neighborhoods throughout the United States

0.4.2 BetterBuildings Information System (BBIS or System)

The BetterBuildings Information System, referred to alternatively as BBIS or System, is the system for collecting, tracking, managing, and reporting data to support BetterBuildings programmatic goals and objectives.

0.4.3 Data Element

A Data Element is an atomic unit of data that has precise meaning or precise semantics.

0.4.4 Domain

A sphere of knowledge, influence, or activity. The subject area to which the user applies a system or part of the system is the domain of the system.

0.4.5 Entity

An Entity is an object fundamentally defined not by its attributes, but by a thread of continuity and identity. It is a "thing" from the system context. It's often helpful to think about these in terms of nouns. Entities have both an identity and a lifecycle.

0.4.6 Model

A Model is a system of abstractions that describes selected aspects of a domain and can be used to solve problems related to that domain.

0.4.7 Systems Implementation Vendor (Vendor)

The Systems Implementation Vendor, referred to as Vendor, is the vendor(s) selected by EERE to implement the BetterBuildings Information System.

0.5 Document Methodology

This document illustrates the logical data model and the data dictionary. Various BetterBuildings domains, entities, and data elements are identified in this document with an alphanumeric designation. This designation consists of two or three capital letters followed by two or three digits. The three letter identification for domain is DOM, for entity is ENT, and for data element is DE.

0.6 ASSUMPTIONS

The following section details the assumptions and design principles that underlie the functional requirements for the Logical Model and Data Dictionary.

0.6.1 BBIS Stakeholder Assumptions

- Assumption # 1: Grantee systems are capable of submitting program data using EERE specified XML Schemas
- Assumption # 2: Grantee systems are capable of submitting program data using EERE specified Excel data collection templates

0.6.2 BBIS Vendor Assumptions

- Assumption # 1: The Vendor shall address the open questions listed out in APPENDIX C: OPEN QUESTIONS

0.7 Data Model

The core data model diagrams below represent the key entities and their relationships. The key entities identified below may actually be broken into multiple entities in the Data Dictionary. The purpose of this diagram is to provide a global understanding of the role of and relationship among the key entities. A complete list of the actual entities is included in Section 4 and the attached Data Dictionary.

0.7.1 Common

Type:	**Package**
Package:	PIM_Domain Entity
Detail:	*Created on 11/9/2010. Last modified on 3/16/2011.*
Notes:	

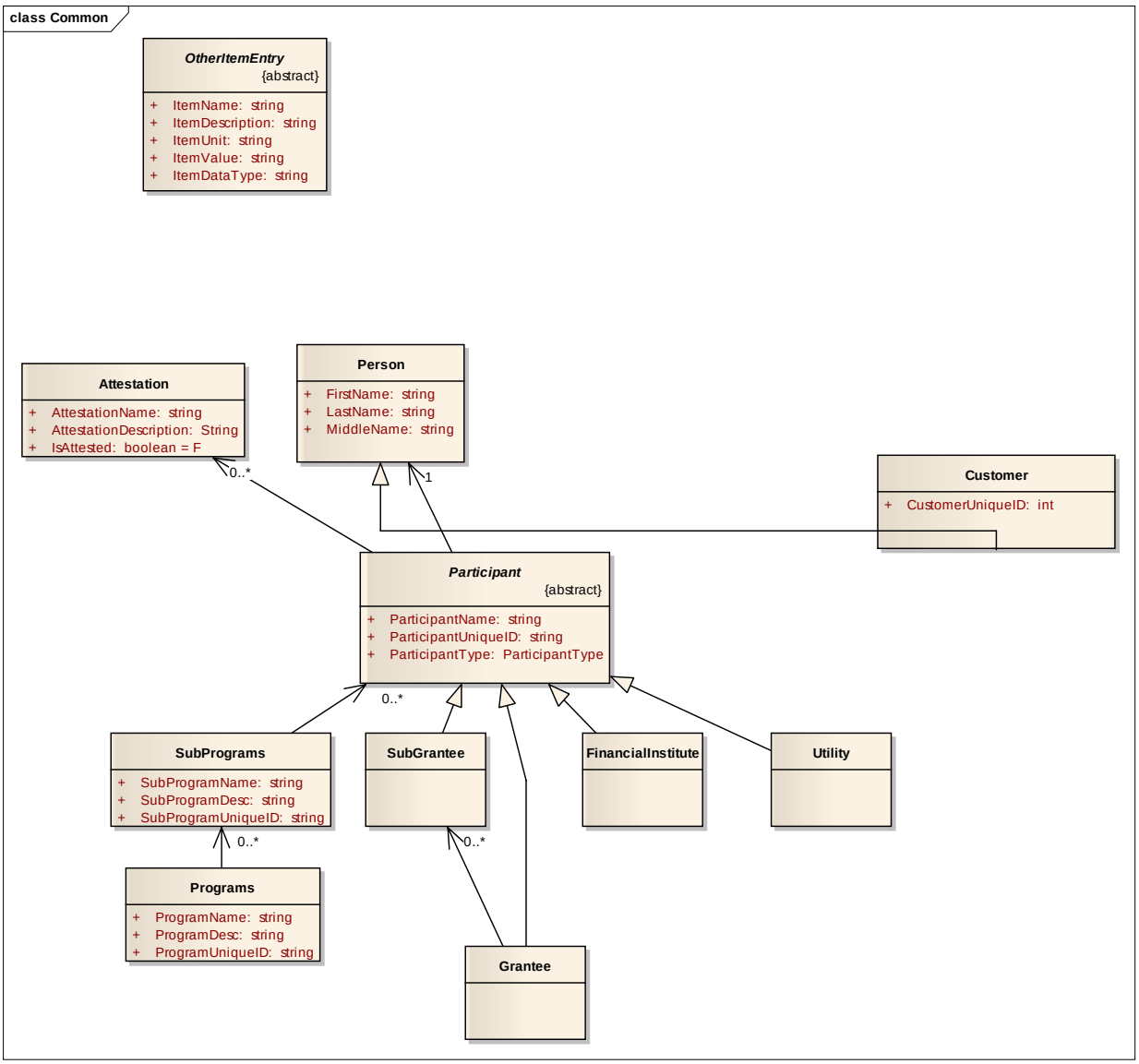

Figure: 1

Attestation

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	AttestationName	string							
	AttestationDescription	String							
	IsAttested	boolean						F	

Relationships

Columns	Association		Notes
	0..*	UtilityProvider. Attestation.Waiver	
	0..*	Participant. Attestation.	
	1..*	Request_Grantee_CommonDetails. Attestation.	

Customer

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about the customers

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	CustomerUniqueID	int							Reference Identifier for Customers

Relationships

Columns	Association		Notes
	1	Building. Customer.	
		Customer. Person.	

FinancialInstitute

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 11/8/2010. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association		Notes
		FinancialInstitute. Participant.	
	1	LoanProduct. FinancialInstitute.	

Grantee

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 11/8/2010. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association		Notes
	1	Request_Grantee_CommonDetails. Grantee.	
		Grantee. Participant.	
	1	GranteeProgramData. Grantee.	
	0..*	Grantee. SubGrantee.	

OtherItemEntry

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 1/19/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ItemName	string							Enter the name of the item
	ItemDescription	string							Enter the description of the item
	ItemUnit	string							Enter the unit of measurement if applicable
	ItemValue	string							Enter the value of the item
	ItemDataType	string							

Participant

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about different Participants in different DOE Programs

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ParticipantName	string							Name of the different participants in different programs
	ParticipantUniqueID	string							Reference Identifier for different

									Participants
	ParticipantType	ParticipantType							

Relationships

Columns	Association		Notes
		Grantee. Participant.	
		FinancialInstitute. Participant.	
	1	Participant. Person.	
	0..*	SubPrograms. Participant.	
	0..*	Participant. Attestation.	
		SubGrantee. Participant.	
		Utility. Participant.	

Person

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	FirstName	string							
	LastName	string							
	MiddleName	string							

Relationships

Columns	Association		Notes
	1	Participant. Person.	
		Customer. Person.	
	1..*	Request_Grantee_CommonDetails. Person.	

Programs

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about different Programs designed by DOE and Different Grantees for EERE

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ProgramName	string							Names of the different Programs
	ProgramDesc	string							Description of the different Programs
	ProgramUniqueID	string							Reference Identifier for Type of Programs

Relationships

Columns	Association	Notes
	Programs. **0..*** SubPrograms.	

SubGrantee

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	SubGranteeProgramData. SubGrantee.	
	SubGrantee. Participant.	
	Grantee. **0..*** SubGrantee.	

SubPrograms

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about different Sub Programs designed for the Programs.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	SubProgramName	string							Names of different Sub Programs under Each Program
	SubProgramDesc	string							Description of the different Sub Programs under

									each Program
	SubProgramUniqueID	string							

Relationships

Columns	Association	Notes
	Programs. **0..*** SubPrograms.	
	SubPrograms. **0..*** Participant.	

Utility

Database: <none>, *Stereotype:* , *Package:* Common
Detail: *Created on* 11/8/2010. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	Utility. Participant.	

0.7.2 Enumeration

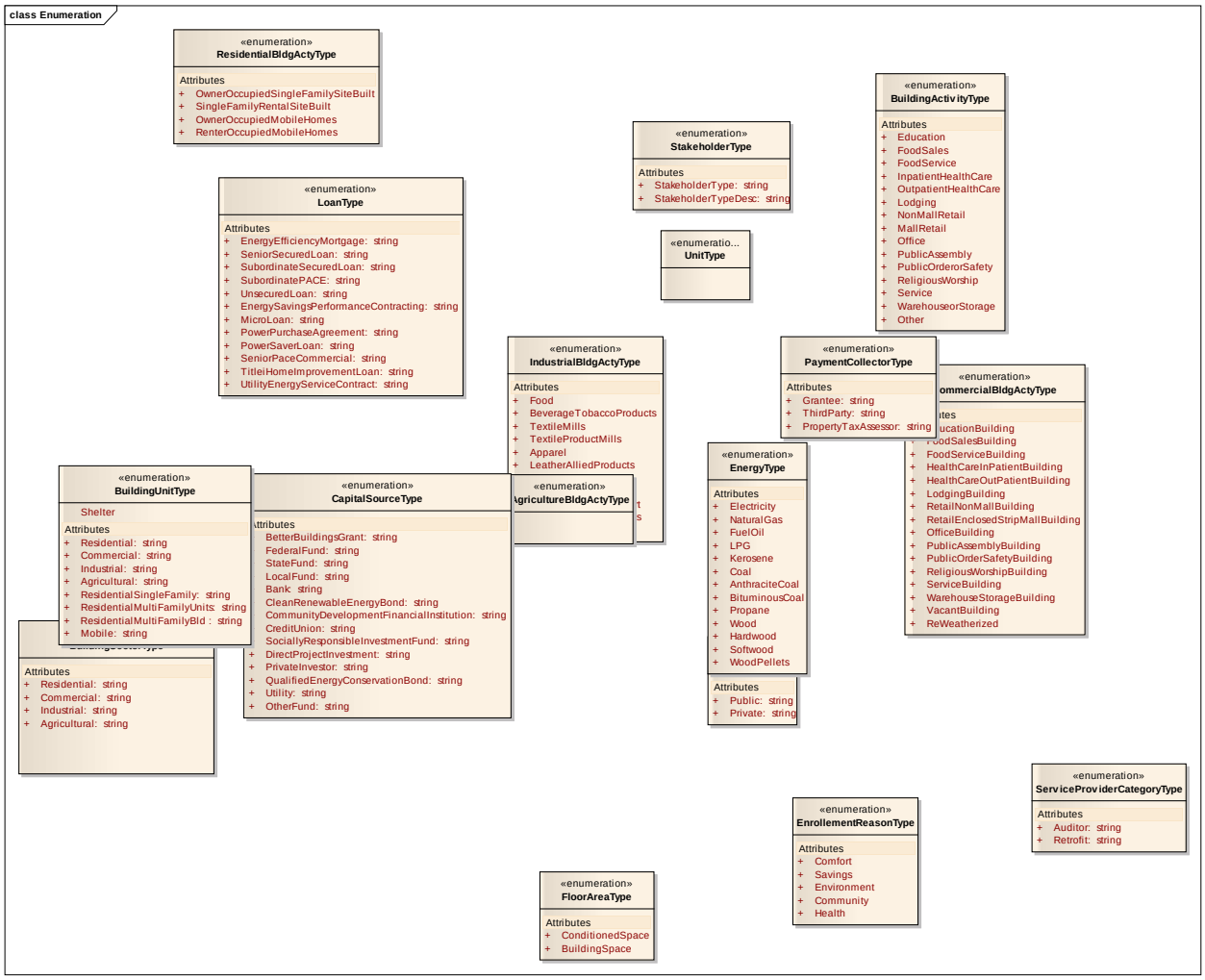

Figure: 2

AgricultureBldgActyType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 3/4/2011. *Last modified on* 3/16/2011.
Notes:

AuditType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	AuditsCompleted. AuditType.	

BuildingActivityType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Education								
	FoodSales								
	FoodService								
	InpatientHealthCare								
	OutpatientHealthCare								
	Lodging								
	NonMallRetail								
	MallRetail								
	Office								
	PublicAssembly								
	PublicOrderorSafety								
	ReligiousWorship								
	Service								
	WarehouseorStorage								
	Other								

BuildingFoundationType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about Building Foundation Type

BuildingSectorType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information About Building Classification

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Residential	string							
	Commercial	string							
	Industrial	string							

	Agricultural	string							

BuildingUnitType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about Building Unit Type

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Residential	string							Types of the Building
	Commercial	string							
	Industrial	string							
	Agricultural	string							
	ResidentialSingleFamily	string							
	ResidentialMultiFamilyUnits	string							
	ResidentialMultiFamilyBld	string							
	Mobile	string							
	Shelter	string							

CapitalSourceType

Database: Java, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BetterBuildingsGrant	string			0				Indicate what portion (in $) of the BetterBuildings grant was used for each program.
	FederalFund	string			0				Indicate any money used from other federal agencies (e.g., any money received from EECBG, SEP, Housing and Urban Development

									Agency, etc.)
	StateFund	string			0				State funds include monies received from solely state-funded sources, including but not limited to systems benefits charges and state appropriations. This does not include money received through the State Energy Program or systems benefit charge, if the source is known.
	LocalFund	string			0				Local funds might include sources such as municipal bond financing, locally-issued Qualified Energy Conservation Bonds, and locally-issued Clean Renewable Energy Bonds.
	Bank	string			0				Indicate any money received from a commercial financial institution.
	CleanRenewable EnergyBond	string			0				Clean renewable energy bonds (CREBs) may be used by certain entities -- primarily in the public sector -- to finance renewable energy projects. The list of qualifying technologies is

									generally the same as that used for the federal renewable energy production tax credit (PTC). CREBs may be issued by electric cooperatives, government entities (states, cities, counties, territories, Indian tribal governments or any political subdivision thereof), and by certain lenders.
	CommunityDevelopmentFinancialInstitution	string			0				A Community Development Financial Institution (CDFI) is a specialized financial institution that works in market niches that are underserved by traditional financial institutions. CDFIs include regulated institutions such as community development banks and credit unions, and non-regulated institutions such as loan and venture capital funds.
	CreditUnion	string			0				A credit union is a member-owned, not-for-profit, cooperative financial institution. Federal credit unions are

									chartered by the National Credit Union Administration and member accounts are insured by the National Credit Union Share Insurance Fund.
	SociallyResponsibleInvestmentFund	string			0				An investment fund, owned by one or more investors, is managed as one entity by one or more investors using capital to create more money through income-producing vehicles or more risk-oriented ventures. A Socially Responsible Investment Fund may fund ventures that integrate environmental, social and governance criteria into the investment strategy.
	DirectProjectInvestment	string			0				Energy performance contracting is a turnkey service, sometimes compared to design/build construction contracting which provides customers with a comprehensive set of energy efficiency,

									renewable energy and distributed generation measures and often is accompanied with guarantees that the savings produced by a project will be sufficient to finance the full cost of the project. A performance contractor can contribute "capital" by purchasing upfront the specific measures to be installed within a building retrofit.
	PrivateInvestor	string			0				The secondary market is a mechanism that allows lenders to obtain liquidity to make additional loans. Through the secondary market, the lender receives immediate liquidity which may then benefit borrowers in the form of lower interest rates and longer fixed rate terms.
	QualifiedEnergyConservationBond	string			0				QECBs are qualified tax credit bonds. With tax credit bonds, generally the borrower who issues the bond pays back only the

									principal of the bond, and the bondholder receives federal tax credits in lieu of the traditional bond interest.
	Utility	string			0				Please indicate any funds received from a utility. To the extent possible, please indicate solely only those funds received from the utility, versus a systems benefit charge or funds from the State Energy Program that may also fund activities at utilities.
	OtherFund	string			0				Indicate any other sources of capital that may have not been addressed already.

CommercialBldgActyType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 3/4/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	EducationBuilding								
	FoodSalesBuilding								
	FoodServiceBuilding								
	HealthCareInPatientBuilding								
	HealthCareOutPatientBuilding								

	LodgingBuilding								
	RetailNonMallBuilding								
	RetailEnclosedStripMallBuilding								
	OfficeBuilding								
	PublicAssemblyBuilding								
	PublicOrderSafetyBuilding								
	ReligiousWorshipBuilding								
	ServiceBuilding								
	WarehouseStorageBuilding								
	VacantBuilding								
	ReWeatherized								

EnergyType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/21/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Electricity								Please enter the name of electricity service provider that bills the building customer.
	NaturalGas								Please enter the name of the natural gas service provider that bills the building customer.
	FuelOil								
	LPG								
	Kerosene								
	Coal								
	AnthraciteCoal								
	BituminousCoal								
	Propane								
	Wood								
	Hardwood								

	Softwood								
	WoodPellets								

EnrollementReasonType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Comfort								
	Savings								
	Environment								
	Community								
	Health								

FloorAreaType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ConditionedSpace								Eligible square footage refers to the floor area of the housing unit that is enclosed by exterior walls. Conditioned space refers to square footage that is heated or cooled. Provide best estimate. Excluding conditioned basement.
	BuildingSpace								Building floorspace includes all the area enclosed by the exterior walls of the building, both finished and

									unfinished, including indoor parking facilities, basements, hallways, lobbies, stairways, and elevator shafts.

FundType

Database: Java, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Public	string			0				
	Private	string			0				

ImprovementActionType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/23/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	EquipmentInstalled								
	EquipmentRemoved								

ImprovementCategoryType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about different Categories of Improvement. This includes Information about the Renewable Energy systems installed during Retrofit

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Heating								
	Cooling								
	EnergyConservation								

IndustrialBldgActyType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 3/4/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Food								
	BeverageTobaccoProducts								
	TextileMills								
	TextileProductMills								
	Apparel								
	LeatherAlliedProducts								
	WoodProducts								
	Paper								
	PrintingRelatedSupport								
	PetroleumCoalProducts								
	Chemicals								

LoanRejectionType

Database: Java, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	NoCreditWorthiness	string			0				
	IncompleteApplication	string			0				
	DelinquentPast	string			0				
	PresentCreditObligations	string			0				
	PresentBankruptcy	string			0				
	PastBankruptcy	string			0				
	ExcessiveObligations	string			0				
	InsufficientCredi	string			0				

	t								
	NoFICOScore	string			0				

LoanType

Database: Java, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes: Types of Different Loans

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	EnergyEfficiencyMortgage	string			0				Energy efficiency mortgages enable homeowners to finance the cost of adding energy efficiency features to new or existing housing as part of their insured home purchase or mortgage refinancing. Indicate with a 'X' if this loan type describes your loan product.
	SeniorSecuredLoan	string			0				A secured loan is attached to the borrower's asset and typically has a lower interest rate than an unsecured loan. Senior status indicates that in the event the lendee defaults, a senior secured loan would be paid first. Indicate with a 'X' if this loan type describes your loan product. Excluding Title I or EEMs.
	SubordinateSecu	string			0				A secured loan is

	redLoan								attached to the borrower's asset and typically has a lower interest rate than an unsecured loan. Subordinate status indicates that in the event the lendee defaults, a subordinate loan would not be paid first. Indicate with a 'X' if this loan type describes your loan product. Excluding Title I or EEMs.
	SubordinatePACE	string			0				In PACE, local governments establish special tax districts with which property owners may apply for a property tax assessment in exchange for funds to implement renewable energy and energy efficiency improvements. A tax lien is a security interest in an item of property to secure the payment of debt or some other obligation, that in turn is paid-down annually or semiannually over a period of several years (usually 15 to 20 years) by the property owner via their property tax

									bill. A subordinate PACE has subordinate or secondary claim on an underlying security or source of payment for debt service, relative to another issue with a higher priority claim. Indicate with a 'X' if this loan type describes your loan product.
	UnsecuredLoan	string			0				An unsecured loan is not attached to any of the borrower's assets and typically has a higher interest rate. Indicate with a 'X' if this loan type describes your loan product. Excluding Title I.
	EnergySavingsPerformanceContracting	string			0				Energy performance contracting is a turnkey service, sometimes compared to design/build construction contracting which provides customers with a comprehensive set of energy efficiency, renewable energy, and distributed generation measures and often is accompanied with guarantees

									that the savings produced by a project will be sufficient to finance the full cost of the project. Indicate with a 'X' if this loan type describes your loan product. Excluding Title I.
	MicroLoan	string			0				Microloans are small loans (typically under $1000) that often have minimal underwriting criteria. Microloans may be used to incentivize specific energy improvement measures. Indicate with a 'X' if this loan type describes your loan product.
	PowerPurchaseAgreement	string			0				HUD and FHA developed PowerSaver as part of the Recovery Through Retrofit initiative launched in May 2009 by Vice President Biden's Middle Class Task Force. Backed by the Federal Housing Administration (FHA), PowerSaver loans will offer homeowners up to $25,000 to make energy-efficient improvements of

									their choice, including the installation of insulation, duct sealing, doors and windows, HVAC systems, water heaters, solar panels, and geothermal systems. Indicate with a 'X' if this loan type describes your loan product.
	PowerSaverLoan	string			0				HUD and FHA developed PowerSaver as part of the Recovery Through Retrofit initiative launched in May 2009 by Vice President Biden's Middle Class Task Force. Backed by the Federal Housing Administration (FHA), PowerSaver loans will offer homeowners up to $25,000 to make energy-efficient improvements of their choice, including the installation of insulation, duct sealing, doors and windows, HVAC systems, water heaters, solar panels, and geothermal systems. Indicate with a 'X' if this

									loan type describes your loan product.
	SeniorPaceCommercial	string			0				In PACE, local governments establish special tax districts with which property owners may apply for a property tax assessment in exchange for funds to implement renewable energy and energy efficiency improvements. A tax lien is a security interest in an item of property to secure the payment of debt or some other obligation, that in turn is paid-down annually or semiannually over a period of several years (usually 15 to 20 years) by the property owner via their property tax bill. Senior PACE has first claim on an underlying security or source of payment for debt service. Senior PACE may still be an option for non Freddie Mac/Fannie Mae mortgages. Indicate with a 'X' if this loan type describes your loan product.

	TitleiHomeImprovementLoan	string			0				The Federal Housing Administration (FHA) makes it easier for consumers to obtain affordable home improvement loans by insuring loans made by private lenders to improve properties that meet certain requirements. The Title I program insures loans to finance the light or moderate rehabilitation of properties, as well as the construction of nonresidential buildings on the property. HUD's Title I Loans on single family homes may be used for alterations, repairs and for site improvements. Loans on multifamily structures may be used only for building alteration and repairs. Indicate with a 'X' if this loan type describes your loan product.
	UtilityEnergyServiceContract	string			0				In a Utility Energy Service Contract, a utility arranges financing to cover

									the capital costs of the project, which are repaid over the contract term from cost savings generated by the energy efficiency measures. With this arrangement, agencies can implement energy improvements with no initial capital investment. The net cost to the Federal agency is minimal, and the agency saves time and resources by using the one-stop shopping provided by the utility. Indicate with a 'X' if this loan type describes your loan product.

OutreachMarketingModelType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/21/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BusinessOrganizationOutreach								
	Contests								
	DirectMail								
	DoorToDoor								
	EarnedMedia								
	Hotline								
	NeighborhoodMeeting								
	OneStopShop								
	OnlineAdvertisin								

	g								
	School								
	Church								
	Library								
	SocialMedia								
	Telethon								
	PhoneCalls								
	TV								
	Radio								
	Newspaper								
	Webinar								
	Website								
	Unknown								

ParticipantType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about Classification of Participants.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Utility								
	Grantee								
	SubGrantee								
	FinancialInstitute								

PaymentCollectorType

Database: Java, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Grantee	string			0				
	ThirdParty	string			0				
	PropertyTaxAssessor	string			0				

PaymentStatusType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/24/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not	Uniqu	Len	Pre	Scal	Init	Notes

			Null	e		c	e		
	0 = current account								
	1 = 30-59 days past due								
	2 = 60-89 days								
	3 = 90-119 days								
	4 = 120-149 days								
	5 = 150-179 days								
	6 = 180+ days past due								
	B = account not opened								
	D = no pmt data available								
	E = 0 balance or current								
	L = charged off								

PhoneType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 3/2/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Mobile								

RenewableType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 1/21/2011. *Last modified on* 3/16/2011.
Notes: Select the renewable energy system that was installed with this project. Eligible renewable energy systems are defined by the EECBG ARRA reporting requirements: solar, wind, solar thermal (i.e., solar water heaters), geothermal (i.e., ground source heat pumps), biomass, and hydropower.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	SolarThermal								
	Solar								
	Wind								
	Geothermal								
	Biomass								
	Other								

ResidentialBldgActyType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 3/4/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	OwnerOccupied SingleFamilySite Built								
	SingleFamilyRen talSiteBuilt								
	OwnerOccupied MobileHomes								
	RenterOccupied MobileHomes								

ServiceProviderCategoryType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Categorize the Service Providers based on their work.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Auditor	string							
	Retrofit	string							

StakeholderType

Database: <none>, *Stereotype:* «enumeration», *Package:* Enumeration
Detail: *Created on* 10/28/2010. *Last modified on* 3/16/2011.
Notes: Different Types of Stakeholders for the Initial Marketing.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	StakeholderType	string							Different Stakeholders Types for Initial Market Plan
	StakeholderType Desc	string							Description about the Different Stakeholders types description for Initial Market Plan

0.7.3 Grantee-Finance

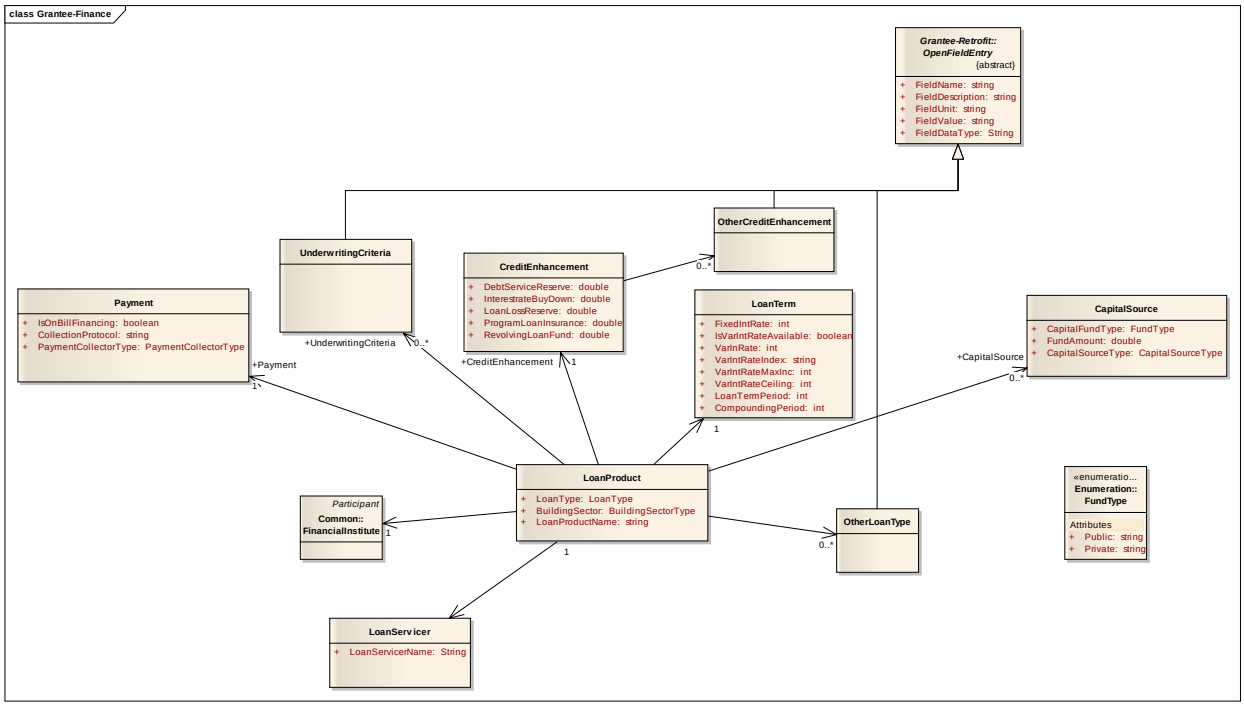

Figure: 3

CapitalSource

Database: Java, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	CapitalFundType	FundType			0				
	FundAmount	double			0				Specify the fund amount in dollars.
	CapitalSourceType	Capital Source Type							

Relationships

Columns	Association	Notes
	0..* LoanProduct. CapitalSource.CapitalSource	

CreditEnhancement

Database: Java, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes: Types of credit enhancement

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	DebtServiceReserve	double			0				Debt service is the amount of money necessary to pay interest on outstanding bonds, the principal of maturing bonds and the required contributions to a sinking fund for term bonds. A debt service reserve is a fund in which moneys are placed in reserve to be used to pay debt service if pledged revenues are insufficient to satisfy the debt service requirements. The debt service reserve fund may be entirely funded with bond proceeds at the time of issuance, may be funded over time through the accumulation of pledged revenues, or may be funded only upon the occurrence of a specified event (e.g., upon failure

									to comply with a covenant in the bond contract). In addition, issuers may sometimes authorize the provision of a surety bond or letter of credit to satisfy the debt service reserve fund requirement in lieu of cash. If the debt service reserve fund is used in whole or part to pay debt service, the issuer usually is required to replenish the fund from the first available revenues.
	InterestrateBuyDown	double			0				Enter the dollar amount used to buy down an interest rate. An interest rate buy-down is when one party (e.g., grantee) provides a lump sum payment based on the net present value of the difference between a target return to the lender or loan investor and the borrower's interest rate. This has two primary purposes: (1) increase project affordability and demand by reducing monthly payments and (2)

									maintaining or increasing lender / investor interest in making loans by yielding higher returns.
	LoanLossReserve	double			0				Enter the dollar amount used to capitalize a loan-loss reserve. A loan loss reserve is an allocation of funds to absorb some of the risk that loans may default. It is one of several tools that grantees can use to entice lenders to provide lending capital to clean energy projects at a lower interest rate or at more flexible terms than they might otherwise do.
	ProgramLoanInsurance	double			0				Enter the dollar amount used to fund a loan insurance. Loan insurance can be used to insure loans made by private lenders to improve properties that meet certain requirements. Lending institutions make loans from their own funds to eligible borrowers to finance these improvements.
	RevolvingLoanF	double			0				Enter the dollar

	und								amount used to capitalize a revolving loan fund (RLF). A RLF is a source of money from which loans are made. Loans are made to borrowers consistent with standard prudent lending practices. As loans are repaid by the borrowers, the money is returned to the RLF to make additional loans. In that manner, the RLF fund becomes an ongoing or "revolving" financial tool. The interest and fees paid by the RLF borrowers support program administration so that the fund's capital base remains intact.

Relationships

Columns	Association		Notes
	1	LoanProduct. CreditEnhancement.CreditEnhancement	
	0..*	CreditEnhancement. OtherCreditEnhancement.	

LoanProduct

Database: <none>, *Stereotype:* , *Package:* Grantee-Finance

Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.

Notes: We define financing programs according to loan product offerings, which may apply to one building sector or multiple sectors, and may be offered by unique financial institutions. If your program design changes, please update the LOAN PRODUCT INFO tab and send to us again. The

BetterBuildings database and reporting requirements have been built acknowledging that programs will evolve over time.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	LoanType	LoanType			0				If the loan types do not apply to your loan product offering, describe it in other item.
	BuildingSector	BuildingSectorType			0				
	LoanProductName	string							

Relationships

Columns	Association		Notes
	1	LoanProduct. LoanTerm.	
	1	LoanProduct. FinancialInstitute.	
	1..*	Request_Grantee_Finance. LoanProduct.	
	1	LoanProduct. CreditEnhancement.CreditEnhancement	
	1	LoanProduct. LoanServicer.	
	0..*	LoanProduct. CapitalSource.CapitalSource	
	1	LoanInformation. LoanProduct.	
	1	LoanProduct. Payment.Payment	
	0..*	LoanProduct. UnderwritingCriteria.UnderwritingCriteria	
	0..*	LoanProduct. OtherLoanType.	

LoanServicer

Database: <none>, *Stereotype:* , *Package:* Grantee-Finance

Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.

Notes: The loan servicer is the company that collects monthly mortgage payments and disperses property taxes and insurance payments. Loan servicers also monitor nonperforming loans, contact delinquent borrowers, and notify insurers and investors of potential

problems. Loan servicers may be the lender or a specialized company that just handles loan servicing under contract with the lender or the investor who owns the loan.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	LoanServicerName	String			0				Enter the name of the lender who originates the loan. Origination is the process of preparing, submitting, and evaluating a loan application; it generally includes a credit check, verification of employment, and a property appraisal. The originating lender is the financial institution that prepared the loan.

Relationships

Columns	Association	Notes
	1 LoanProduct. LoanServicer.	

LoanTerm

Database: Java, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	FixedIntRate	int							The interest rate is the amount of interest charged on a monthly loan payment, expressed as a percentage. Sometimes loan

									products will have multiple interest rates available, depending on the applicant's credit score.
	IsVarIntRateAvailable	boolean							Indicate whether variable interest rate loans (such as Adjustable Rate Mortgages) are available. Variable interest rates are loans that have an interest rate that fluctuates according to an index. This is in contrast to fixed rate loans, that have a constant rate.
	VarInRate	int							Please name the index to which the floating interest rate is attached. Indices are weekly average yields on United States Treasury securities adjusted to a constant maturity of one year, published in the Federal Reserve Bulletin H.15.
	VarIntRateIndex	string							Please name the index to which the floating interest rate is attached. Some common indices used are: 11th District Cost of Funds Index (COFI), London Interbank Offered

									Rate (LIBOR), 12-month Treasury Average Index (MTA), Constant Maturity Treasury (CMT), National Average Contract Mortgage Rate, Bank Bill Swap Rate (BBSW)
	VarIntRateMaxInc	int							Please indicate, if applicable, the maximum amount by which the variable interest rate can increase in one year. This is part of the initial terms of a variable interest rate loan, such as an Adjustable Rate Mortgage (ARM).
	VarIntRateCeiling	int							If variable interest rates are used, indicate the lifetime interest rate ceiling (or maximum), if applicable.
	LoanTermPeriod	int							The loan term is the period of time agreed upon by the lender and the borrower to repay the loan
	CompoundingPeriod	int							Compounding period indicates the number of times a year that the interest rate is applied to the cost of the loan.

Relationships

Columns	Association	Notes

Columns	Association	Notes
	1 LoanProduct. LoanTerm.	

OtherCreditEnhancement

Database: <none>, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 3/7/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	OtherCreditEnhancement. OpenFieldEntry.	
	0..* CreditEnhancement. OtherCreditEnhancement.	

OtherLoanType

Database: <none>, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 3/10/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	0..* LoanProduct. OtherLoanType.	
	OtherLoanType. OpenFieldEntry.	

Payment

Database: Java, *Stereotype:* , *Package:* Grantee-Finance
Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	IsOnBillFinancing	boolean			0				On-bill financing/payment is a repayment mechanism for a loan. It can be structured as an on-bill loan (personal loan) or a loan attached to

									the meter (so the obligation to make principal and interest payments transfers when billing obligation transfers).
	CollectionProtocol	string			0				Please describe the collection protocol used (e.g., if a third party is used, when homeowner is contacted, etc.)
	PaymentCollectorType	PaymentCollectorType							

Relationships

Columns	Association	Notes
	1 LoanProduct.Payment.Payment	

UnderwritingCriteria

Database: Java, *Stereotype:* , *Package:* Grantee-Finance

Detail: *Created on* 2/28/2011. *Last modified on* 3/16/2011.

Notes: Underwriting is the process of analyzing a loan application to determine the amount of risk involved in making the loan; it includes a review of the potential borrower's credit history and a judgment of the property value.The standard measures for evaluation are the applicant's debt-to-income ratio and FICO score, which is a score used by the credit rating industry to represent credit worthiness based on bill payment histories, current debt, and other criteria. Most programs use these standard measures; however a few use proxies for credit such as utility bill or property tax bill payment history that potentially widen the eligible pool of borrowers.

Relationships

Columns	Association	Notes
	UnderwritingCriteria.OpenFieldEntry.	
	0..* LoanProduct.UnderwritingCriteria.UnderwritingCriteria	

0.7.4 Grantee-Program

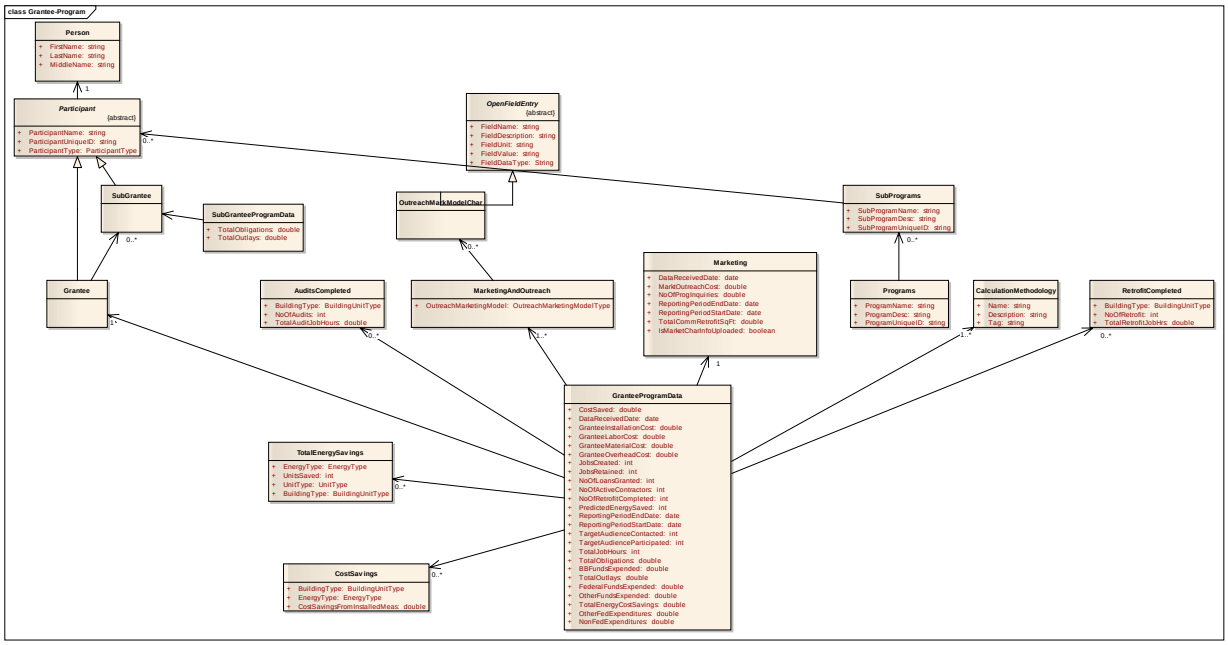

Figure: 4

AuditsCompleted

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes: Total audits completed among BB and leveraged partners

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BuildingType	BuildingUnitType							
	NoOfAudits	int							
	TotalAuditJobHours	double							

Relationships

Columns	Association		Notes
	0..*	GranteeProgramData. AuditsCompleted.	
		AuditsCompleted. AuditType.	

CalculationMethodology

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 1/27/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Name	string							
	Description	string							
	Tag	string							

Relationships

Columns	Association		Notes
	1..*	GranteeProgramData. CalculationMethodology.	

CostSavings

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 3/15/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BuildingType	BuildingUnitType							
	EnergyType	EnergyType							
	CostSavingsFromInstalledMeas	double							

Relationships

Columns	Association		Notes
	0..*	GranteeProgramData. CostSavings.	

GranteeProgramData

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 10/23/2010. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	CostSaved	double							Cost Saved on Energy during that Period
	DataReceivedDate	date							Data Received from Grantee

	GranteeInstallationCost	double							Grantees Total installation cost for that period
	GranteeLaborCost	double							Grantees Labor Cost for that period
	GranteeMaterialCost	double							Please report the expenditures incurred as part of a retrofit directly associated with the installation of more energy efficient equipment, appliances, or building components (e.g. insulation, windows, etc.) at the PROGRAM leve. Includes funds from all sources.
	GranteeOverheadCost	double							Please report other program expenditures for the quarter at the PROGRAM level, not classified as materials, labor, marketing, or outreach. Includes funds from all sources.
	JobsCreated	int							No of Jobs Created for that Period
	JobsRetained	int							No of Jobs retained for that Period
	NoOfLoansGranted	int							No of Audits Completed for that Period
	NoOfActiveContractors	int							Number of active contractors performing

									retrofits under program. Active contractors are contractors (qualified according to your program guidance) who have performed one or more retrofits.
	NoOfRetrofitCompleted	int							No of Retrofit Completed for Reporting Period in each sector
	PredictedEnergySaved	int							Predicted Energy Saved for that Period
	ReportingPeriodEndDate	date							Data Period end Date
	ReportingPeriodStartDate	date							Data Period start Date
	TargetAudienceContacted	int							No of audience contacted by Grantee during that Period
	TargetAudienceParticipated	int							No of audience contacted by Grantee during that Period
	TotalJobHours	int							A job hour worked includes hours worked administrating or working under projects funded by ARRA and leveraged funds (i.e.., state and local funds, utilities, financial institutions, private contributions, etc). This includes, but is not limited to, administrative staff, consultants

									and contractors involved in the management or deployment of retrofit and audit activities. Please note this is separate and in addition to the ARRA Federal Reporting requirements.
	TotalObligations	double							Obligations mean the amounts of orders placed, contracts and subgrants awarded, goods and services received, and similar transactions during a given period that will require payment by the prime recipient during the same or a future period. EECBG Program Notice 09-02B details when funds used for financing programs are considered to be obligated. Funds to be expended by a department internal to the prime recipient (i.e., not expended to reimburse a vendor nor award a sub-recipient) and not used for a financing program are considered

									obligated when they have been committed to the internal department that will expend the funds.
	BBFundsExpended	double							Please enter the total amount of BetterBuildings grant money expended by your program this quarter.
	TotalOutlays	double							Outlays (expenditures) mean charges made to the project or program. They may be reported on a cash or accrual basis. For reports prepared on a cash basis, outlays are the sum of actual cash disbursement for direct charges for goods and services, the amount of indirect expense incurred and the amount of cash advances and payments made to contractors and sub-recipients.
	FederalFundsExpended	double							Please enter the total amount of other Federal leveraged funds expended by your program during the most recent quarter. Other federal funds many include funds from

									EECBG and SEP, loans from HUD, etc..
	OtherFundsExpended	double							Please enter the total estimated amount of Non-Federal funds expended during the most recent quarter. This includes third-party, in-kind contributions and the portion of the costs of a federally assisted project or program not borne by the Federal Government.
	TotalEnergyCostSavings	double							Please enter the total annual cost savings based on the total measures installed during the most recent quarter. *If direct installation was conducted in your program, please include here the estimated savings from those efforts. In the Methodology tab, you can specify what types of measures were undertaken in your direct installation efforts.
	OtherFedExpenditures	double							Please enter the total amount of other Federal leveraged funds expended by your program during the

									most recent quarter. Other federal funds many include funds from EECBG and SEP, loans from HUD, etc..
	NonFedExpenditures	double							

Relationships

Columns	Association		Notes
	1	GranteeProgramData. Marketing.	
	1	Request_Grantee_Program. GranteeProgramData.	
	1..*	GranteeProgramData. MarketingAndOutreach.	
	1	GranteeProgramData. Grantee.	
	0..*	GranteeProgramData. RetrofitCompleted.	
	1..*	GranteeProgramData. CalculationMethodology.	
	0..*	GranteeProgramData. CostSavings.	
	0..*	GranteeProgramData. TotalEnergySavings.	
	0..*	GranteeProgramData. AuditsCompleted.	

Marketing

Database: <none>, *Stereotype:* , *Package:* Grantee-Program

Detail: *Created on* 10/23/2010. *Last modified on* 3/16/2011.

Notes: This section tries to determine the effectiveness of a number of outreach mechanisms. We understand that some mechanisms may overlap -- for instance a homeowner may hear of the program through a piece of mail or a phone call or a referral -- but may ultimately fill out an application online.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	DataReceivedDate	date							Data Received from Grantee
	MarktOutreachC	double							Please report the

	ost								grant expenditures for communications activities designed to identify, reach and motivate potential program participants to take actions to either learn more (e.g. audit or other informational activity) energy efficiency or initiate an energy efficiency retrofit at the PROGRAM level.
	NoOfProgInquiries	double							No of Program Inquires in each Outreach Mechanism
	ReportingPeriodEndDate	date							Data Period end Date
	ReportingPeriodStartDate	date							Data Period start Date
	TotalCommRetrofitSqFt	double							Total Commercial Retrofit Sq Ft completed in each Outreach Mechanism
	IsMarketCharInfoUploaded	boolean							If available, please upload a copy of your market characterization survey via the BetterBuildings webportal (forthcoming). A market characterization study is one that identifies various audiences within your service region that enables

									program administrators to tailor outreach strategies and messages to specific audiences.

Relationships

Columns	Association		Notes
	1	GranteeProgramData. Marketing.	

MarketingAndOutreach

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 1/24/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	OutreachMarketingModel	OutreachMarketingModelType							

Relationships

Columns	Association		Notes
	0..*	MarketingAndOutreach. OutreachMarkModelChar.	
	1..*	GranteeProgramData. MarketingAndOutreach.	

OutreachMarkModelChar

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 3/7/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association		Notes
	0..*	MarketingAndOutreach. OutreachMarkModelChar.	
		OutreachMarkModelChar. OpenFieldEntry.	

RetrofitCompleted

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 1/24/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BuildingType	BuildingUnitType							
	NoOfRetrofit	int							
	TotalRetrofitJobHrs	double							

Relationships

Columns	Association	Notes
	0..* GranteeProgramData. RetrofitCompleted.	

SubGranteeProgramData

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	TotalObligations	double							Obligations mean the amounts of orders placed, contracts and subgrants awarded, goods and services received, and similar transactions during a given period that will require payment by the prime recipient during the same or a future period. EECBG Program Notice 09-02B details when funds used for financing

									programs are considered to be obligated. Funds to be expended by a department internal to the prime recipient (i.e., not expended to reimburse a vendor nor award a sub-recipient) and not used for a financing program are considered obligated when they have been committed to the internal department that will expend the funds.
	TotalOutlays	double							Outlays (expenditures) mean charges made to the project or program. They may be reported on a cash or accrual basis. For reports prepared on a cash basis, outlays are the sum of actual cash disbursement for direct charges for goods and services, the amount of indirect expense incurred and the amount of cash advances and payments made to contractors and sub-recipients.

Relationships

Columns	Association	Notes

Columns	Association	Notes
	SubGranteeProgramData. SubGrantee.	

TotalEnergySavings

Database: <none>, *Stereotype:* , *Package:* Grantee-Program
Detail: *Created on* 3/10/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	EnergyType	Energy Type							
	UnitsSaved	int							Please enter the total estimated units saved based on the total retrofit measures installed during the most recent quarter. *If direct installation was conducted in your program, please include here the estimated savings from those efforts. In the Methodology tab, you can specify what types of measures were undertaken in your direct installation efforts.
	UnitType	UnitType							
	BuildingType	BuildingUnitType							

Relationships

Columns	Association	Notes
	0..* GranteeProgramData. TotalEnergySavings.	

0.7.5 Grantee-Retrofit

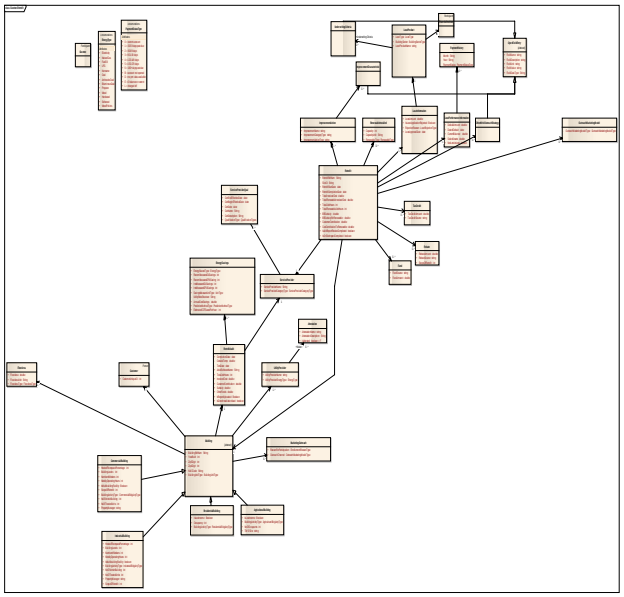

Figure: 5

AgriculturalBuilding

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	IsLowIncome	Boolean							Low-income is defined as being qualified for Federal assistance which is characterized as being below 200 percent of poverty line or 60 percent of median state income.
	BuildingActivityType	AgricultureBldgActyType							
	NoOfOccupants	int							Enter the average number of

									occupants that lived in the home during the past year. "Occupy" means that the housing unit was the person's usual or permanent place of residence at the time of the first field contact. Household members include babies, lodgers, boarders, employed persons who live in the housing unit, and persons who usually live in the household but are away traveling or in a hospital. Not included as household members are: (1) persons who are normally members of the household but who were away from home as college students or members of the armed forces at the time of the interview; (2) persons temporarily visiting with the household if they have a place of residence elsewhere; (3) persons who take their meals with

									the household but usually lodge or sleep elsewhere; (4) domestic employees or other persons employed by the household who do not sleep in the same housing unit; or (5) former members of the household who are inmates of correctional, penal, or mental institutions, homes for the aged or needy, nursing homes, hospitals, hospices, convents or monasteries, or other places in which residents may remain for long periods of time. By definition, in the RECS tables and analyses, the number of households is the same as the number of occupied housing units.
	TMY2Site	string							

Relationships

Columns	Association	Notes
	AgriculturalBuilding. Building.	

Building

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about the initial state of the building

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	BuildingRefNum	String							
	YearBuilt	int							Please enter the year that the building was built. This field is voluntary. If the data are collected by your program, it will be helpful to report. We prefer to have the year that the building was built. If the exact year is not known, please provide an estimate.
	Zip5Digit	int							Enter a five-digit zip code.
	Zip4Digit	int							If preferable, enter the four-digit zip code.
	NAICCode	String							
	BuildingUnitType	BuildingUnitType							

Relationships

Columns	Association		Notes
	1	Building. Customer.	
	1	Building. Retrofit.	
	1..*	Building. FloorArea.	
	1	Building. RetrofitAudit.	
		AgriculturalBuilding. Building.	
		ResidentialBuilding. Building.	
	1..*	Building. UtilityProvider.	

Columns	Association	Notes
	0..* Building. MarketingOutreach.	
	CommercialBuilding. Building.	
	IndustrialBuilding. Building.	

CommercialBuilding

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	HeatedFloorspacePercentage	int							The approximate percentage of heated floor space is the percentage of a building's square footage designed to be heated to at least 50 degrees Fahrenheit.
	BuildingLevels	int							The number of building levels is the number of levels in the tallest section of a building that are actually considered a part of the building, including parking areas, basements, or other floors below ground level, but excludes half-floors, mezzanines, balconies, and lofts.
	NumberofWorkers	int							The number of workers is defined as the number of

									people working in the building during the main shift on a typical workday during the year. The main shift is the time when most people are in the building. Included in this definition are self-employed workers and volunteers. Excluded are customers, patients, and students, unless they are working for establishments in the building. Also excluded are employees who work out of the office, such as salespeople who report into the office, delivery people with routes, and messengers.
	WeeklyOperatingHours	int							The number of hours per week that the building is used, excluding hours when the building is occupied only by maintenance, security, or other support personnel. For buildings with a schedule that varies during the year, "Weekly Operating Hours" refers to the total weekly hours for

									the schedule most often followed. If operating hours vary throughout a building, the usual operating hours of the largest business in the building (based on floorspace) determine the operating hours for the building.
	IsMultibuildingFacility	Boolean							A multibuilding facility is a group of two or more buildings on the same site owned or operated by a single organization, business, or individual. Please select from the options listed: Not Part of a Multibuilding Facility, College or University, Primary or Secondary School, Office Complex, Retail Complex, Religious Campus or Complex, Health Care Complex, Lodging or Resort Complex, Government Complex, or Other.
	ScopeOfRetrofit	int							If the whole building was not audited and retrofitted, please

									indicate what percentage of the building floorspace was affected by the retrofit.
	BuildingActivityType	CommercialBldgActyType							
	NoOfUnitsInBuilding	int							If the project is a multifamily residential building, select whether the building is a 2-4 unit building or a 5+ unit building.
	NoOfTreatedUnits	int							
	PropertyManager	string							

Relationships

Columns	Association	Notes
	CommercialBuilding. Building.	

EnergySavings

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	EnergySourceType	EnergyType							
	RecomMeasuresEASavings	int							Include the estimate savings possible per year based on the audit report. If multiple recommendations on savings potential are available, please report the maximum

									potential savings without regard to cost-effectiveness.
	RecomMeasures EPASaving	int							To determine the estimated percent energy savings, divide the estimated utility savings per year by the building owner's utility use over the past 12 months. Depending on the program, homeowners may receive annual energy use data from audit software or from their utility bill.
	InstMeasuresEA Savings	int							
	InstMeasuresEP ASavings	int							
	SavingsMeasure UnitType	UnitTy pe							Please enter the appropriate unit of measurement for the selected fuel type.
	UtilityRateStruct ure	String							If applicable, please describe the utility rate structure used to predict the cost savings.
	AnnualCostSavi ngs	double							Include the annual cost savings based on the measures installed during the retrofit. This information may be obtained from a post-retrofit quality assurance/quality

									control assessment, modeled savings, deemed savings, or another method.
	PredictionMethodType	PredictionMethodType							
	EstimatedCCFSavedPerYear	int							Include the estimate of possible CCF savings per year based on the audit report. If multiple recommendations on savings potential are available, please report the maximum potential savings without regard to cost-effectiveness. If the building does not use natural gas, go to the next section.

Relationships

Columns	Association	Notes
	1..* RetrofitAudit. EnergySavings.	

FloorArea

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/23/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	FloorArea	double							
	FloorAreaUnit	String							
	FloorAreaType	FloorAreaType							

Relationships

Columns	Association	Notes
	Building. **1..*** FloorArea.	

Fund

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/15/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	FundSource	string							
	FundAmount	double							

Relationships

Columns	Association	Notes
	Retrofit. **0..*** Fund.	

ImprovementAction

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ImprovementName	string							
	ImprovementCategoryType	string							
	ImprovementActionType	string							

Relationships

Columns	Association	Notes
	Retrofit. **1..*** ImprovementAction.	
	ImprovementAction. **0..*** ImprovementCharacteristic.	

ImprovementCharacteristic

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/4/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association		Notes
	0..*	ImprovementAction. ImprovementCharacteristic.	
		ImprovementCharacteristic. OpenFieldEntry.	

IndustrialBuilding

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	HeatedFloorspacePercentage	int							The approximate percentage of heated floor space is the percentage of a building's square footage designed to be heated to at least 50 degrees Fahrenheit.
	BuildingLevels	int							The number of building levels is the number of levels in the tallest section of a building that are actually considered a part of the building, including parking areas, basements, or other floors below ground level, but excludes half-floors, mezzanines, balconies, and lofts.
	NumberofWorkers	int							he number of workers is defined as the number of people working in

									the building during the main shift on a typical workday during the year. The main shift is the time when most people are in the building. Included in this definition are self-employed workers and volunteers. Excluded are customers, patients, and students, unless they are working for establishments in the building. Also excluded are employees who work out of the office, such as salespeople who report into the office, delivery people with routes, and messengers.
	WeeklyOperatingHours	int							The number of hours per week that the building is used, excluding hours when the building is occupied only by maintenance, security, or other support personnel. For buildings with a schedule that varies during the year, "Weekly Operating Hours" refers to the total weekly hours for the schedule most

									often followed. If operating hours vary throughout a building, the usual operating hours of the largest business in the building (based on floorspace) determine the operating hours for the building.
	IsMultibuildingFacility	boolean							
	BuildingActivityType	IndustrialBldgActyType							
	NoOfUnitsInBuilding	int							
	NoOfTreatedUnits	int							
	PropertyManager	string							
	ScopeOfRetrofit	int							If the whole building was not audited and retrofitted, please indicate what percentage of the building floorspace was affected by the retrofit.

Relationships

Columns	Association	Notes
	IndustrialBuilding. Building.	

LoanInformation

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/23/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	LoanAmount	double							Enter the amount

									of the loan(s) taken on by the customer.
	IsLoanApplicationRejected	Boolean							Indicate if the building owner applied for a loan, but was rejected.
	RejectionReason	LoanRejectionType							
	LoanApprovalDate	date							

Relationships

Columns	Association	Notes
	1..* Retrofit. LoanInformation.	
	1 LoanInformation. LoanProduct.	

LoanPerformanceInformation

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/24/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	DefaultAmount	double							Total amount past due that is needed to bring loan current
	DateofDefault	date							Indicate the first date when the loan went 30 days past due
	CurrentBalance	double							Unpaid principal balance on a loan unpaid by borrower
	SaleofAssets	double							Proceeds from sales of assets to recover unpaid loan amount (if applicable)
	NetLenderLoss	double							The net lender loss is the total amount

									of money lost by lender. I.e. current balance - assets sale amount.

Relationships

Columns	Association		Notes
	0..*	LoanPerformanceInformation. PaymentHistory.	
	1	Retrofit. LoanPerformanceInformation.	

MarketingOutreach

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ReasonForParticipation	EnrollementReasonType							Select the reason that the building owner participated in the program. Choices include comfort, savings, environment, community, and health. List another reason if applicable.
	OutreachChannel	OutreachMarketingModelType							How did the building owner hear about the program

Relationships

Columns	Association		Notes
	0..*	Building. MarketingOutreach.	

OpenFieldEntry

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/3/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	FieldName	string							
	FieldDescription	string							
	FieldUnit	string							
	FieldValue	string							
	FieldDataType	String							

Relationships

Columns	Association	Notes
	OutreachMarkModelChar. OpenFieldEntry.	
	OtherCreditEnhancement. OpenFieldEntry.	
	OtherMrktOutreachStrategy. OpenFieldEntry.	
	UnderwritingCriteria. OpenFieldEntry.	
	ImprovementCharacteristic. OpenFieldEntry.	
	OtherLoanType. OpenFieldEntry.	

OtherMrktOutreachStrategy

Database: Java, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/3/2011. *Last modified on* 3/16/2011.
Notes:

Relationships

Columns	Association	Notes
	Retrofit. **0..*** OtherMrktOutreachStrategy.	
	OtherMrktOutreachStrategy. OpenFieldEntry.	

OutreachMarketingModel

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/3/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	OutreachMarketingModelType	OutreachMarke							

		tingModelType							

Relationships

Columns	Association	Notes
	0..* Retrofit. OutreachMarketingModel.	

PaymentHistory

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/24/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Month	String							
	Year	String							
	PaymentStatus	PaymentStatusType							

Relationships

Columns	Association	Notes
	0..* LoanPerformanceInformation. PaymentHistory.	

Rebate

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/10/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	RebateAmount	double							
	RebateSource	string							
	ScopeOfRetrofit	int							If the whole building was not audited and retrofitted, please indicate what percentage of the building floorspace was affected by the retrofit.

Relationships

Columns	Association	Notes
	Retrofit. **0..*** Rebate.	

RenewableInstalled

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/21/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	Capacity	int							Report the capacity of the renewable energy system.
	CapacityUnit	String							Select the appropriate units to designate the capacity of the renewable energy installation. The following are the expected units that would be reported with each renewable energy sytem: Solar [kW], wind [kW], solar thermal (i.e., solar water heater) [square feet], ground source geothermal systems (i.e., ground source heat pumps) [tons], biomass [kW] for non-transport applications, otherwise [gallons per year], hydropower [kW], capacity of other systems [BTU/h].

	RenewableType	RenewableType							

Relationships

Columns	Association	Notes
	Retrofit. **0..*** RenewableInstalled.	

ResidentialBuilding

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/18/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	IsLowIncome	Boolean							
	Occupancy	int							Enter the average number of occupants that lived in the home during the past year. "Occupy" means that the housing unit was the person's usual or permanent place of residence at the time of the first field contact. Household members include babies, lodgers, boarders, employed persons who live in the housing unit, and persons who usually live in the household but are away traveling or in a hospital.
	BuildingActivityType	ResidentialBldgActyTy							

		pe							

Relationships

Columns	Association	Notes
	ResidentialBuilding. Building.	

Retrofit

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: To Capture What is Improved and Who did the Improvement.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	RetrofitRefNum	String							
	SiteID	String							Assign a unique Site ID Number to the entire "site," where more than one "Project" may have occurred.
	RetrofitStartDate	date							Please enter the date the retrofit started. A retrofit is defined as a project that is anticipated to achieve at least 15% energy savings over the course of the BetterBuildings program. A project site can undergo multiple retrofits to achieve greater than or equal to 15% energy savings.
	RetrofitCompletionDate	date							Date the retrofit completed for the specific Improvement.
	TotalInvoicedCost	double							Enter the total cost of the retrofit (customer

									contribution plus BetterBuildings funds plus other leveraged funds.) Other leveraged funds can include those from both Federal and non-Federal sources (EECBG, SEP, financial institutions listed in the LOAN PRODUCT INFO tab, etc.)
	TotalRenewableInvoicedCost	double							Enter the total cost of the renewable energy system.
	TotalJobHours	int							Please indicate how many job hours (persons multiplied by hours worked) total were needed to complete the project.
	TotalRenewableJobHours	int							
	BBSubsidy	double							Enter the amount of funding from BetterBuildings that went to fund the retrofit.
	BBSubsidyForRenewable	double							Enter the amount of funding from BetterBuildings that went to fund the renewable energy installation.
	CustomerContribution	double							Estimate the cost that the customer paid or will pay that was not included in a loan.
	CustContributionToRenewable	double							Estimate the cost of the renewable

									energy installation to the customer (ultimate out-of-pocket expense).
	IsJobReportReviewCompleted	boolean							QA/QC should be reported as it is completed; ensure that the unique ID # is linked to the activity. A job report review process typically involves review of retrofit project paperwork or other off-site review that checks program compliance and provides for follow-up with the contractor when necessary.
	IsOnSiteInspecCompleted	boolean							QA/QC should be reported as it is completed. Ensure that the unique ID # is linked to that activity. On-site inspections focus on evaluating a participating contractor's performance of a home energy assessment, development of a scope of work of eligible improvements, and/or proper installation of the improvements selected by the customer.

Relationships

Columns	Association	Notes

Columns	Association		Notes
	0..*	Retrofit. OtherMrktOutreachStrategy.	
	1..*	Retrofit. ImprovementAction.	
	1	Building. Retrofit.	
	1..*	Request_Grantee_Retrofit. Retrofit.	
	0..*	Retrofit. RenewableInstalled.	
	1..*	Retrofit. LoanInformation.	
	1	Retrofit. LoanPerformanceInformation.	
	0..*	Retrofit. TaxCredit.	
	0..*	Retrofit. Rebate.	
	0..*	Retrofit. Fund.	
	1..*	ServiceProvider. Retrofit.	
	0..*	Retrofit. OutreachMarketingModel.	

RetrofitAudit

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about the Data collected from all tests

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	CompletionDate	date							Please indicate when the audit was completed. If multiple audits were completed, please report the audit that is most relevant to enabling a subsequent retrofit to be undertaken. The audit data can

									be updated in future reports by ensuring that the unique ID # is used consistently.
	OutsideTemp	double							Outside temperature at time of tests
	TestDate	date							Date tests were performed
	AduitSoftwareName	String							Please provide the software that the auditor used to estimate energy savings.
	TotalJobHours	int							Information on job hours could be requested from auditors and obtained on the audit report itself. Reporting audit job-hours may also be done by estimating following discussions with the auditors who are part of your program, based on a certain number of hours per audit completed.
	InvoicedCost	double							For the audit costs, we are only requiring the total invoiced audit cost (i.e., what the contractor is ultimately being paid).
	CustomerContribution	double							Estimate the cost of the audit to the customer.
	Subsidy	double							Enter the amount of funding from

									BetterBuildings that went to fund the audit.
	OtherFunds	double							Leveraged funds means an estimate of the third-party, in-kind contributions and the portion of the costs of a federally assisted project or program not borne by BetterBuildings grant or the customer.
	IsReportUploaded	Boolean							Please indicate whether the audit report for this building is available to be uploaded (e.g., in PDF or a zip file) via a web portal.
	IsDirectInstallationUsed	boolean							Direct installation refers to the placement of low-cost energy saving measures, which can be done in conjunction with a building energy audit. Potential installed measures include compact fluorescent light bulbs, low-flow showerheads and faucet aerators, water heater wraps, water pipe insulation, furnace filters, refrigerator/freezer thermometers, and setback thermostats.

Relationships

Columns	Association		Notes
	1	Building. RetrofitAudit.	
	1	RetrofitAudit. ServiceProvider.	
	1..*	RetrofitAudit. EnergySavings.	

ServiceProvider

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 10/17/2010. *Last modified on* 3/16/2011.
Notes: Information about List of contractors who installed the improvements

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	ServiceProvider Name	String							Company performing the Improvement or performing the Energy Audits
	ServiceProvider CategoryType	ServiceProviderCategoryType							

Relationships

Columns	Association		Notes
	0..*	ServiceProvider. ServiceProviderQual.	
	1..*	ServiceProvider. Retrofit.	
	1	RetrofitAudit. ServiceProvider.	

ServiceProviderQual

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 10/18/2010. *Last modified on* 3/16/2011.
Notes: Please select any applicable contractor certifications, whether there were multiple contractors, or there was one "whole house" contractor. A contractor must follow BPI standards AND be certified, in order to count as being BPI-certified.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes

	CertEndEffective Date	date							Service Providers Certificate Expiry Date
	CertBeginEffectiveDate	date							Service Providers Certificate Begin Date
	CertDate	date							Service Provider Certification Date
	CertName	String							
	CertDescription	String							
	QualificationType	QualificationTypes			0				

Relationships

Columns	Association	Notes
	0..* ServiceProvider. ServiceProviderQual.	

TaxCredit

Database: <none>, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 3/10/2011. *Last modified on* 3/16/2011.
Notes:

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	TaxCreditAmount	double							
	TaxCreditSource	string							

Relationships

Columns	Association	Notes
	0..* Retrofit. TaxCredit.	

UtilityProvider

Database: Java, *Stereotype:* , *Package:* Grantee-Retrofit
Detail: *Created on* 1/17/2011. *Last modified on* 3/16/2011.
Notes: Name of electricity or gas service provider that bills the building customer.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
	UtilityProviderName	string							
	UtilityProviderE	Energy							

	nergyType	Type							

Relationships

Columns	Association	Notes
	0..* UtilityProvider. Attestation.Waiver	
	1..* Building. UtilityProvider.	

APPENDIX A: LOGICAL DATA MODEL APPROVAL

The undersigned acknowledge that they have reviewed the Better Building Program Logical Data Model and agree with the information presented within this document. Changes to this Logical Data Model will be coordinated with, and approved by, the undersigned, or their designated representatives.

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

APPENDIX B: GLOSSARY

Acronym	Definition
API	Applications Programming Interface
ASP	Application Service Provider
ARTS	Automated Routing Transportation System
B2B	Business to Business
BBP	BetterBuildings Program
BBIS	BetterBuildings Information Systems
BTP	Building Technologies Program
COTS	Commercial Off-the-Shelf
DBA	Database Administrator
DOE	Department of Energy
EAI	Enterprise Application Integration
FRD	Functional Requirements Document
FTP	File Transfer Protocol
GUI	Graphical User Interface
HTTP	Hypertext Transfer Protocol
IT	Information Technology
ODBC	Open Database Connectivity
PM	Program Manager
POC	Point of Contact
QA	Quality Assurance
QC	Quality Control
RDBMS	Relational Database Management System
SIP	Service Interaction Profile
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol
SQL	Structured Query Language
SSL	Secure Socket Layer
URL	Universal Resource Locator
VSAM	Virtual Storage Access Method
WSDL	Web Services Description Language
XML	Extensible Markup Language

APPENDIX C: OPEN QUESTIONS

- What is the Availability and Backup strategy for the database / Data warehouse / Data Marts?
- What is the Calculation used to calculate the Amount of greenhouse gases reduced. Need to make sure to all the data elements are collected in the data model, which are used in the calculation.
- Need more detail about the award Numbers and how BBIS system will get that information?
- How BBIS will get the NAICS Code information. Assuming this information also part of the data the Grantees Pass to BBIS.
- Is there a system available to feed the following information? If not how the BBIS system will get the data
    - Information about Different Programs
    - Information about different Regions
    - Information about different Affinity Groups
    - Information about Participating Grantees in each Program (Here Better Building)
        - Grantees Budget for that program
        - Target Retrofit
    - Information about Participating Financial institutes in Better Building Program
    - Information about Participating Utility Companies in Better building Program
    - Account Manager Information and who are all the Grantees they managing.
- Who is responsible to generate the Unique ID.? Is separate Unique ID's will be generated for building and customer.
- Rejected Loan Applications: What details needed from Financial Institutes for reporting other than Reasons to reject.
- Number of buildings retrofit is based on the Unique Retrofit or Unique Building.(Multiple retrofit can happen in the same home)
- What are the possibilities to get some sample data for different dimensions to understand the data in a better way?

- How the Security restrictions for reports and dashboards needs to be implemented. Is there any integration with OID / LDAP?

APPENDIX D: XML SCHEMAS

BBIS_DataType_Common.xsd

BBIS_DataType_Enumeration.xsd

BBIS_DataType_Grantee_Finance.xsd

BBIS_DataType_Grantee_Program.xsd

BBIS_DataType_Grantee_Retrofit.xsd

BBIS_Request_Attachment.xsd

BBIS_Request_Common.xsd

BBIS_Request_Loan_Product.xsd

BBIS_Request_Program.xsd

BBIS_Request_Retrofit.xsd