mass save®
Savings through energy efficiency

From TRM to TRL

Steve Menges, National Grid

February 25, 2015

Technical Reference Manual (TRM)

- Organize evaluation results for all prescriptive measures offered by Massachusetts PAs
- Over 150 measures and their attributes are stored in the TRM

IMPACT FACTORS	• e.g., In-Service Rates, Realization Rates, Coincidence Factors
SAVINGS VALUES	• e.g., kW, kWh, Oil, Propane
NEIs	• e.g., wastewater, property value

From This……

mass save
Savings through energy efficiency

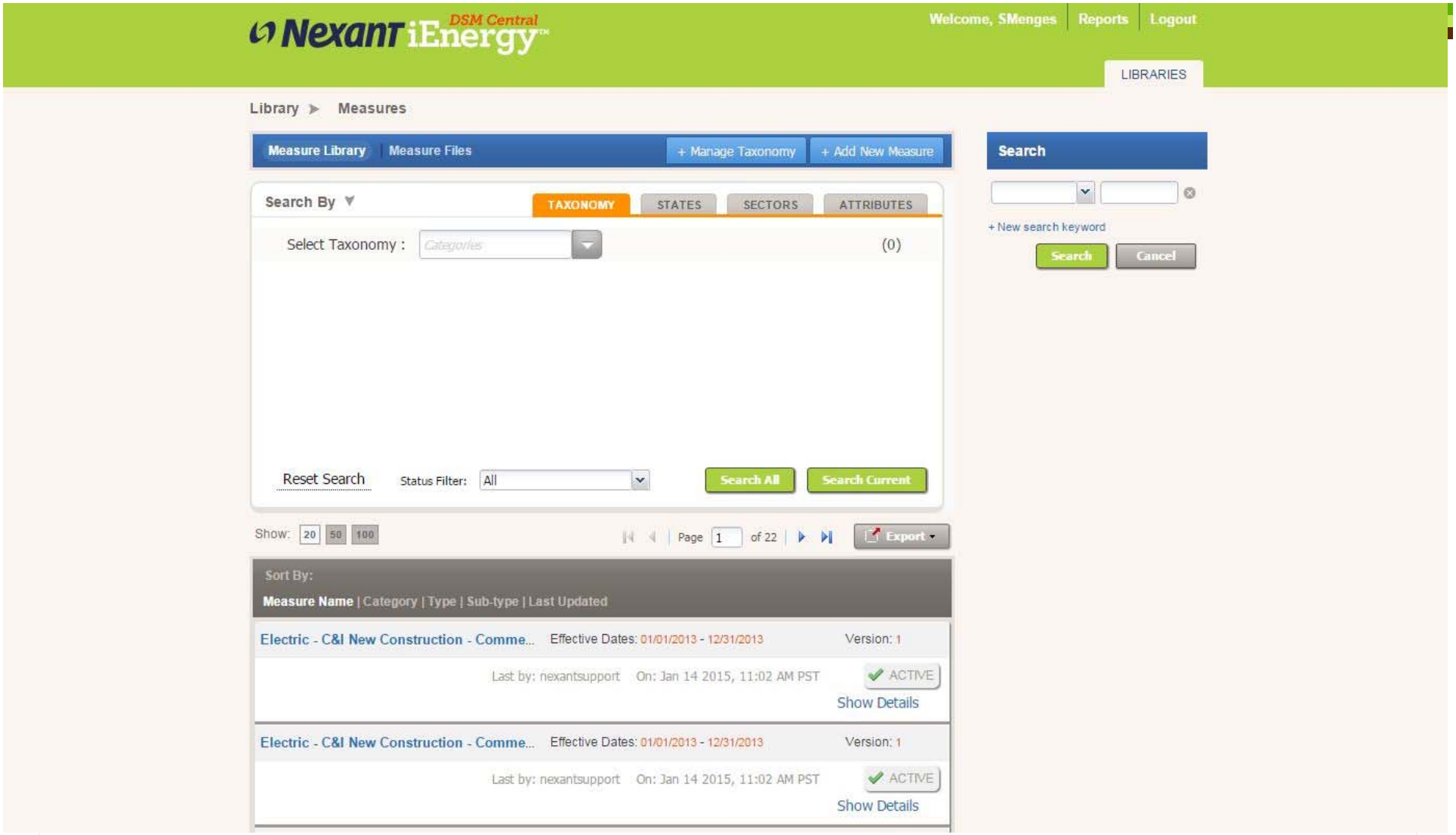
Massachusetts
Technical Reference Manual
for Estimating Savings from Energy Efficiency Measures

2013-2015 Program Years – Plan Version

October 2012

berkshire gas · Unitil · nationalgrid
Western Massachusetts Electric · Columbia Gas of Massachusetts · NSTAR
BLACKSTONE GAS COMPANY · New England Gas Company · Cape Light Compact

To This!

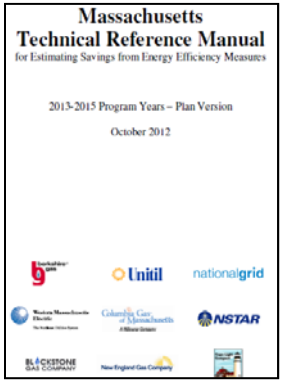

Nexant iEnergy DSM Central
Welcome, SMenges | Reports | Logout
LIBRARIES
Library ▶ Measures
Measure Library | Measure Files
+ Manage Taxonomy
+ Add New Measure
Search
Search By
TAXONOMY
STATES
SECTORS
ATTRIBUTES
Select Taxonomy :
Categories
(0)
+ New search keyword
Search
Cancel
Reset Search
Status Filter: All
Search All
Search Current
Show: 20 50 100
Page 1 of 22
Export
Sort By:
Measure Name | Category | Type | Sub-type | Last Updated
Electric - C&I New Construction - Comme...
Effective Dates: 01/01/2013 - 12/31/2013
Version: 1
Last by: nexantsupport On: Jan 14 2015, 11:02 AM PST
ACTIVE
Show Details
Electric - C&I New Construction - Comme...
Effective Dates: 01/01/2013 - 12/31/2013
Version: 1
Last by: nexantsupport On: Jan 14 2015, 11:02 AM PST
ACTIVE
Show Details

TRL

- Introducing the New TRL
  - **Technical Reference Library**

  - All electronic “TRL” to be completed by summer 2015.

  - **Timeline**
    - Mid March-2015 TRL in staging
    - Early Summer- 2015 TRL in full production

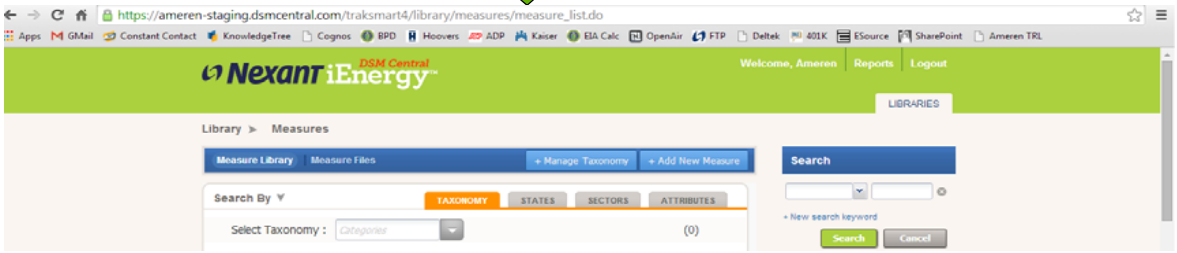


AS1099

	C	AC	AD	AF	AG	AM	AO	AQ	AR	AS	AV
1		Level 2 - Attributes									
2	ID	Savings						Costs			
3	Measure Name	Total Gross Inc	Energy Savings Source Docu	Total Gross Avera	Demand Savings Source	Energy Savings	Gross Increi	Incremental C	Cost Unit	Cost Source Docu	Measure Life
862	CFL - 13W (60W incand equiv) POST-EISA: Efficient Produc	31.50	Morgan Measure Libraries	0.00256	Morgan Measure Libraries	Algorithm		$0.00	per bulb		9
886	Window Replacement_SF: Home Energy Performance	1,103.00	Morgan Measure Libraries	0.51700	Morgan Measure Libraries	Deemed	38 therms	$1,500.00	per home	Morgan Measure Lit	20
887	CFL - 13W (60W incand equiv) POST-EISA: Home Energy Pe	31.50	Morgan Measure Libraries	0.00256	Morgan Measure Libraries	Algorithm		$0.00	per bulb		9
958	CFL - 13W (60W incand equiv) POST-EISA: Lighting	31.50	Morgan Measure Libraries	0.00256	Morgan Measure Libraries	Algorithm		$0.00	per bulb		9
975	Window Replacement_MF: Low Income	1,103.00	Morgan Measure Libraries	0.51700	Morgan Measure Libraries	Deemed	38 therms	$1,500.00	per home	Morgan Measure Lit	20
1049	Window Replacement_SF: New Home Construction	1,103.00	Morgan Measure Libraries	0.51700	Morgan Measure Libraries	Deemed	38 therms	$1,500.00	per home	Morgan Measure Lit	20
1082	CFL - 13W (60W incand equiv) POST-EISA: New Home Cons	31.50	Morgan Measure Libraries	0.00256	Morgan Measure Libraries	Algorithm		$0.00	per bulb		9

A1 Basic Info

	A	E	R	S	T	V	W	X	
	Basic Info								
	Measure Reference Number	Measure Name	Cost Attribute Notes	Cost Unit	Demand savings calculation method	Efficiency Requirement Description	Efficient Case Unit	Efficient Case Value	Eligibility Requir
	858	CFL - 13W (60W incand equiv) POST	Incremental Cost is N	per bulb	Algorithm	13 watt CFL bulb	watt	13	
	883	CFL - 13W (60W incand equiv) POST	Incremental Cost is N	per bulb	Algorithm	13 watt CFL bulb	watt	13	
	954	CFL - 13W (60W incand equiv) POST	Incremental Cost is N	per bulb	Algorithm	13 watt CFL bulb	watt	13	
	1078	CFL - 13W (60W incand equiv) POST	Incremental Cost is N	per bulb	Algorithm	13 watt CFL bulb	watt	13	
	882	Window Replacement_SF: Home E	0	per home	Deemed	Minimum threshold for credit: SHGC	0	0	
	971	Window Replacement_MF: Low Inc	0	per home	Deemed	Minimum threshold for credit: SHGC	0	0	
	1045	Window Replacement_SF: New Ho	0	per home	Deemed	Minimum threshold for credit: SHGC	0	0	



Conversion Worksheet File

Completed

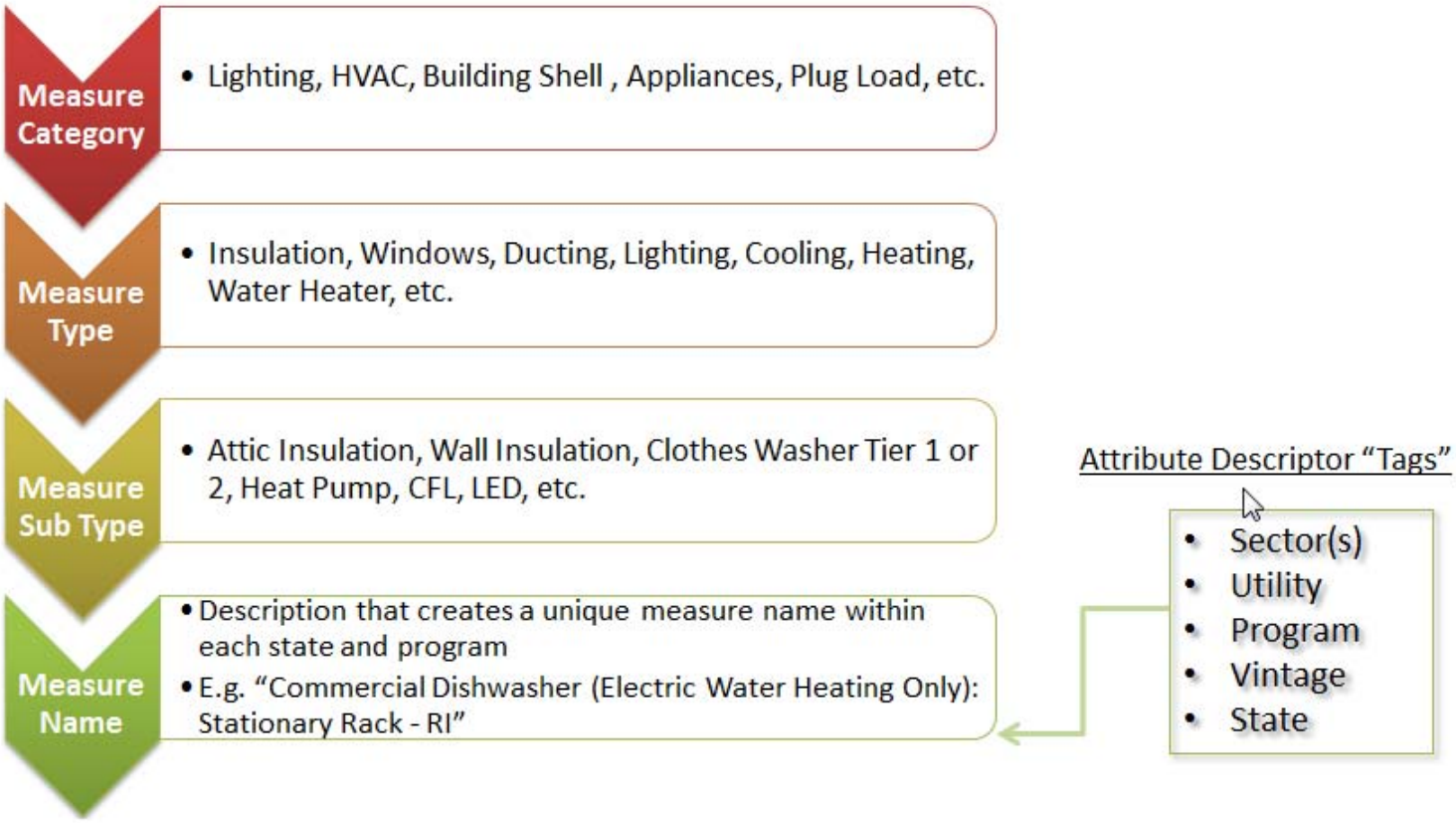
Software Upload File

In Progress

iEnergy TRL

Summer 2015

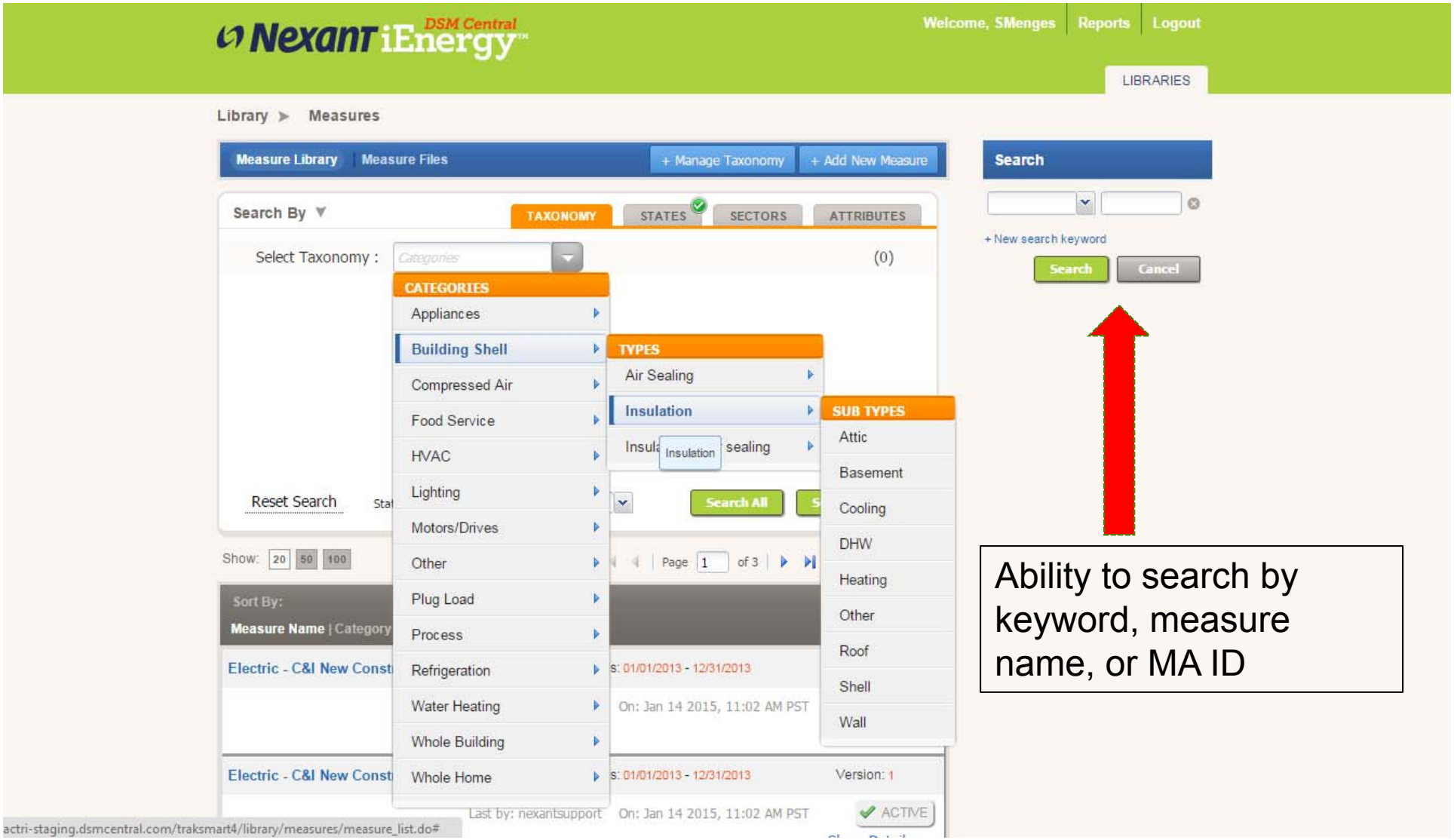
TRL Measure Taxonomy



Measure Naming Conventions

- Now in TRM:
  - **Commercial Electric Fryer**
- From TRL:
  - **Electric-C&I New Construction-Cooking Equipment-Commercial Electric Fryer-All PAs**
- PA Specific Measure with varied realization rates
  - Electric-C&I New Construction-Refrigerated Air Dryer- Dryer (100<=CFM<200)-**Eversource(NSTAR)….MA_0035.2**

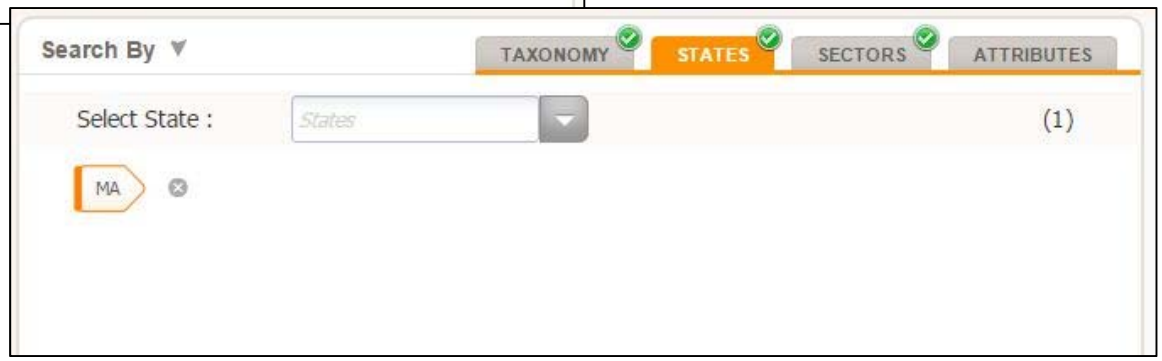
TRL Process

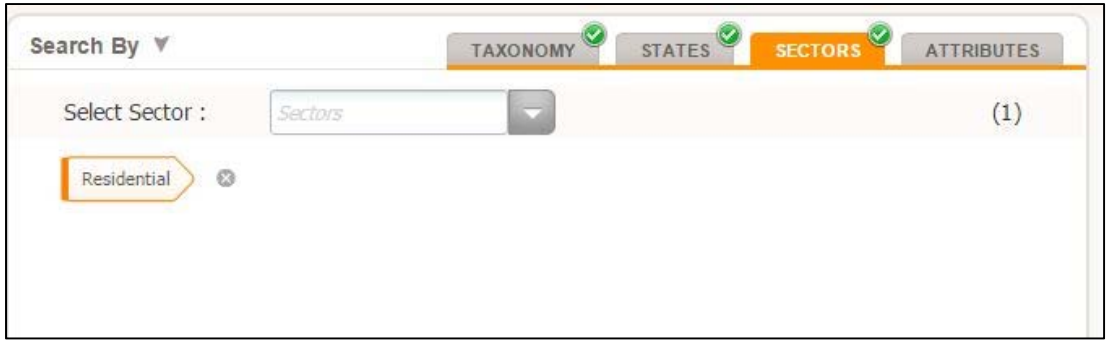


Ability to search by keyword, measure name, or MA ID

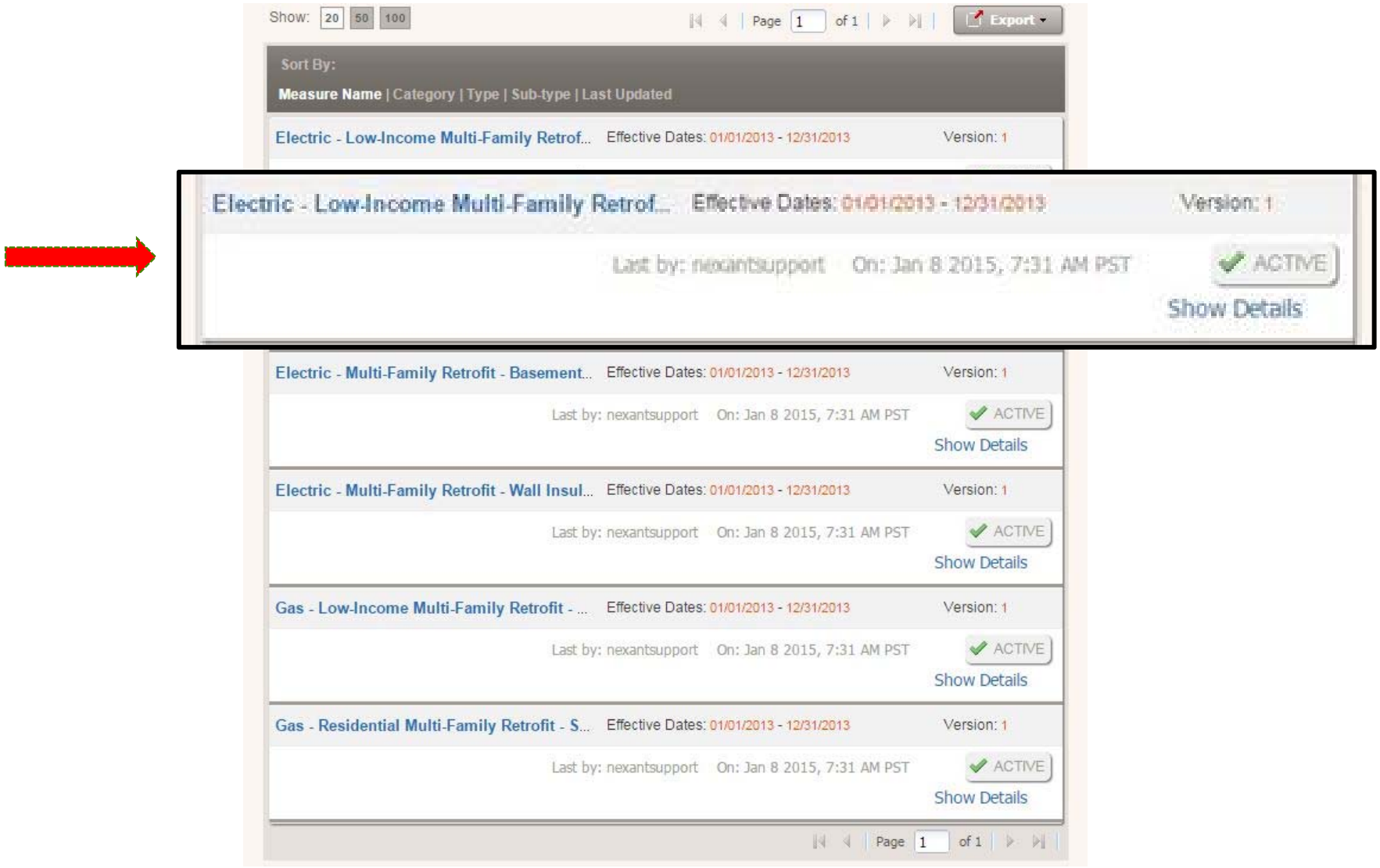
Filtering Capabilities

By taxonomy, state, sector, various attributes

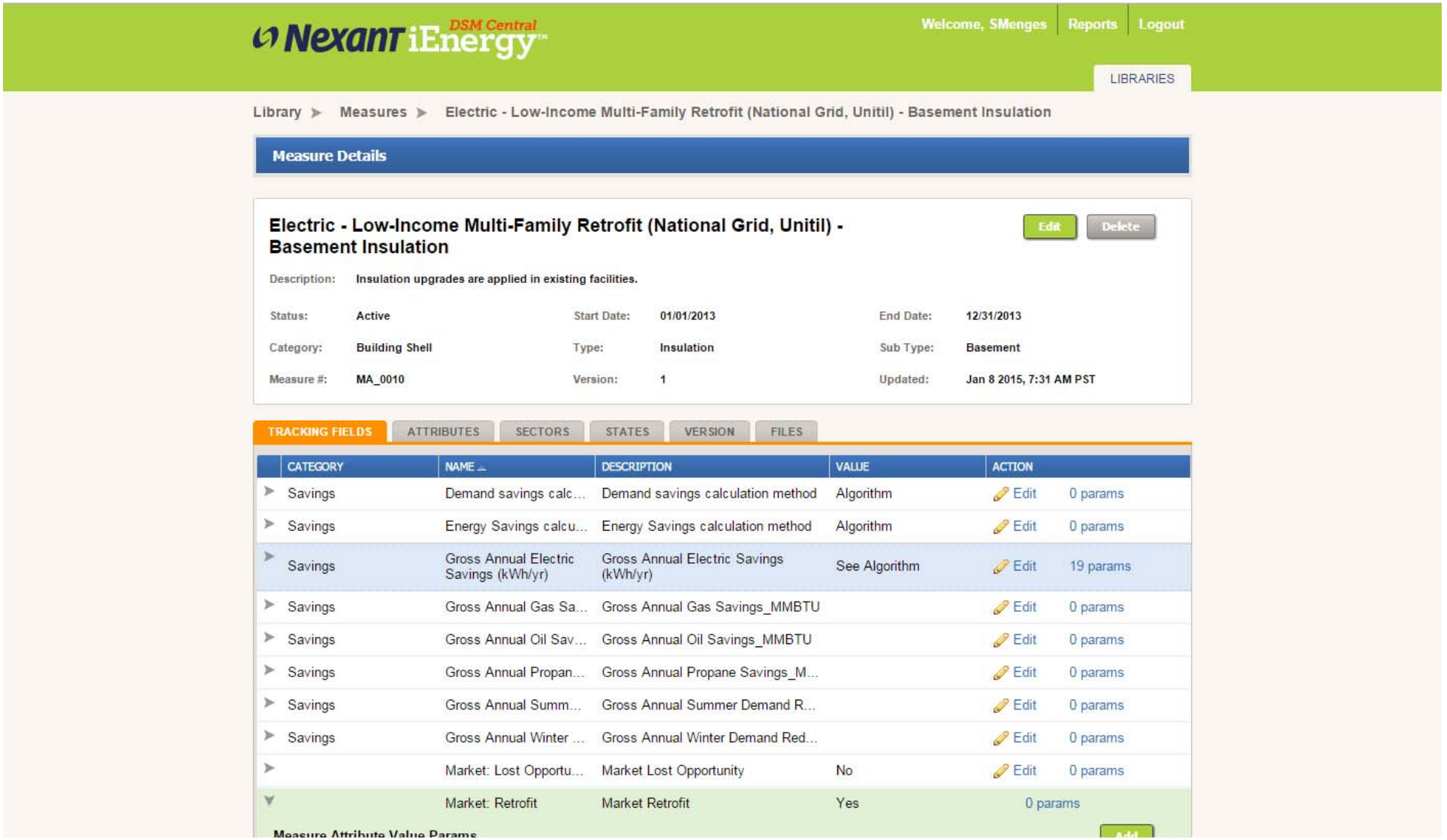




Search Results



Measure Tracking Fields



Attribute table

▶	Baseline & Requirem...	Efficiency Value	Efficiency Value		Edit	0 params
▶		Energy Impact: Electric	Energy Impact: Electric	Yes	Edit	0 params
▶		Energy Impact: Gas	Energy Impact: Gas	No	Edit	0 params
▶		Energy Impact: Oil	Energy Impact: Oil	No	Edit	0 params
▶		Energy Impact: Propane	Energy Impact: Propane	No	Edit	0 params
▶		Free Ridership	Free Ridership		Edit	0 params
▶	General	General attribute notes	General Attribute Notes		Edit	0 params
▼		In-Service Rate	In_Service Rate	Varies by PA		3 params

Measure Attribute Value Params Add

Name	Value	Source	Doc Ref	Action
In-Service Rate_heating	1	All installations have 100% in service rate since all PA programs include verification of equipment installations.		Edit Delete
In-Service Rate_cooling	1	All installations have 100% in service rate since all PA programs include verification of equipment installations.		Edit Delete
Note		All installations have 100% in service rate since all PA programs include verification of equipment installations.		Edit Delete

▶		MeasureClassification	Measure Classification	Evaluated	Edit	0 params
▶		Net-to-Gross Ratio	Net-to-Gross Ratio		Edit	0 params
▶		Non-energy benefits -...	Non_Energy Benefits _ Annual per...		Edit	0 params
▶		Non-energy benefits -...	Non_Energy Benefits _ Annual per...		Edit	0 params
▶		Non-energy benefits -...	Non_Energy Benefits _ Annual per...	See Appendix C: Non... mpacts	Edit	0 params

Benefits Anticipated with the TRL

- Easy access and more user friendly
- Easy integration for internal modelling
- Real time updates to measures as evaluations are finished
- New reporting capabilities