

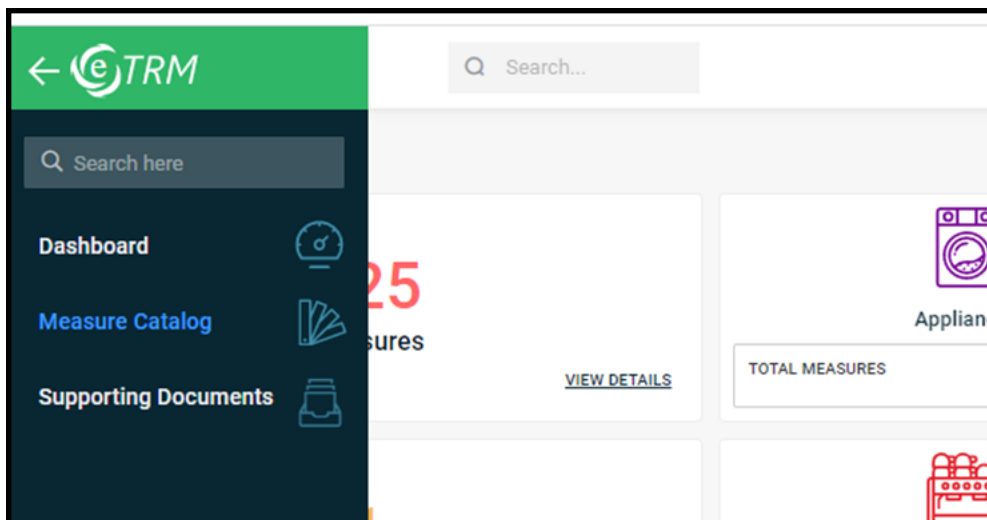
Announcement: Massachusetts Change to Custom Project Calculations – TMY3 to TMYx files

The Mass Save Program Administrators (PAs) recently received direction on the use of TMYx weather data for MA C&I savings calculations. Specific TMYx weather files must be used for all projects/studies initiated after 7/15/2023. The point of “initiation” is defined as the time the PAs have a signed engagement/commitment from the customer (e.g. date of signed MOU, ESA, Custom Application, or registration form). This implementation approach, tying program changes to new project initiations, is similar to the recent ISP policies that were applied in 2021. As a result, please note that the application of the TMYx change will not have any impact on existing projects or studies that are currently under review. Projects or studies with documented engagement prior to 7/15/2023 must be set up using TMY3 weather data as outlined in the current MA PA Simulation Guideline. Anything initiated after that would use TMYx weather data.

In order to ensure that all projects/studies going forward will use consistent, approved weather files, one file set is being provided. This new weather data is currently loaded on the Mass Save eTRM site but other links will also soon be available in the future.

Listed below are the instructions for the Mass Save link to the TMYx files:

Go into the eTRM using the tokened link (<https://etrm.anbetrack.com/#/workarea/home?token=6d6c45766e692f527044>) on www.masssavedata.com. There is a new section called ‘**Supporting Documents**’ contained within the pulldown menu at the top-left corner.



If Project Expeditors (PEXs) have any projects that have been completed between 7/15-present that has used TMY3 data please reach out to the assigned National Grid technical representative to discuss how to update any calculations that may need to be adjusted.

Change to Custom Project Calculations – TMY3 to TMYx files: Frequently Asked Questions for PEXs and TA Vendors

As of 8/25/2023

1. What is driving the change?

The TMY3 data is based on historical weather data from 1976-2005. The TMY3 data is old and the weather pattern is changing over time.

2. What is the process for updating projects that have been completed between 7/15-present that has used TMY3 data. Will the National Grid technical representatives work with us to identify which calculations need to be adjusted. (general)

Below is table with evaluation timelines. National Grid technical representatives will work with you to identify which calculations need adjustment.

Table ES-1. TMYx adoption calendar

Track	Timeline for Evaluation to Update to TMYx Weather Data*
C&I – Custom	Begin with projects that are initiated by 7/15/2023**
C&I - Prescriptive	Update any ongoing EM&V studies immediately
New Construction -- All	Begin with projects that are initiated by 7/15/2023**
Residential (excluding New Construction)	Update any ongoing EM&V studies immediately

*TMYx dataset resulted from this study

**C&I Custom projects and new construction projects initiated prior to 7/15/2023 should use the TMY3 weather dataset for evaluation. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and PA: 1) Memorandum of Understanding date; 2) Engineering Service Agreement date; 3) Signing of any application; 4) Signing of a registration form

3. Does this change apply to projects using the weatherization or EMS tools or just custom projects?

If there are any EMV studies going on for prescriptive, then we'd start using the data immediately. Assign lower priority to any prescriptive tool as of now, and focus on updating custom tools. If implementation folks want the prescriptive savings to be calculated accurately then they should have a plan to update the tool sometime in future. If that doesn't happen, and the measure is picked up for an evaluation study, then evaluation will use the new data to calculate updated savings.

4. Is this just for e-quest/simulation files or all spreadsheet files?

DNV has provided the files in three format. The *.EPW files are used in EnergyPlus / OpenStudio, *.xlsx are used in Excel, and *.BIN files are used in eQUEST.

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5. MA weather station map: Has any direction been given on the MA map of what weather station should be used?

The study's scope was to provide a dataset that replaces TMY3. TMYx dataset provides weather for the same stations that were included in TMY3 dataset. It is up to the users to select and use data for a particular location.

6. Each of the weather files only contains 8,760 data points. There seems to be quite a bit of data missing. Is this correct?

8,760 points correspond to 8,760 hours (or 365 days) and represent a typical year. Data in some of the 8,760 hours might be missing but that is the case for TMY3 dataset as well. TMY3 weather files contain 8,760 data points as well, corresponding to the appropriate typical meteorological year dataset.

7. Hourly Averages: the TMYx data files include hourly data between 2009-2019. As you can see below there is a large portion of data missing which is cause for concern. Worcester for example has data for 2010, 2012, and 2018 missing. Barnstable is missing 2015 and 2018 data. These are just two examples. Not all weather locations have been reviewed.

TMYx (as well as TMY3) dataset is not designed to provide hourly averages. TMYx data is selected based on the same criteria TMY3 data was selected. Some years may be missing because that particular month's weather data for the station was not representative for TMY and therefore not selected.

Worcester	Barnstable
<input checked="" type="checkbox"/> 2009	<input checked="" type="checkbox"/> 2009
<input checked="" type="checkbox"/> 2011	<input checked="" type="checkbox"/> 2010
<input checked="" type="checkbox"/> 2013	<input checked="" type="checkbox"/> 2011
<input checked="" type="checkbox"/> 2014	<input checked="" type="checkbox"/> 2012
<input checked="" type="checkbox"/> 2015	<input checked="" type="checkbox"/> 2013
<input checked="" type="checkbox"/> 2016	<input checked="" type="checkbox"/> 2014
<input checked="" type="checkbox"/> 2017	<input checked="" type="checkbox"/> 2016
<input checked="" type="checkbox"/> 2019	<input checked="" type="checkbox"/> 2017
	<input checked="" type="checkbox"/> 2019

- **It would be helpful to the vendors if the hourly averages were provided.**

TMYx and TMY3 provide data for a typical meteorological year and they are not supposed to provide hourly averages. TMYx and TMY3 datasets do not provide hourly averages. It differs from NOAA dataset, which include the hourly averages.

- **Should the vendors calculate the hourly averages themselves? How does the missing data affect this approach?**

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TMYx and TMY3 represent typical meteorological years (on TMY for each of the 15 weather stations in MA). DNV does not recommend using hourly averages when normalizing to weather because peak demand (electric and gas) results are not representative.

8. The data provided is in Celsius. Will this data be provided in Fahrenheit or should this be converted?

TMYx (as well as TMY3) provide data in Celsius.

9. No wet bulb data is provided. This is important in cooling calculations. This can be calculated but can be done in various ways.

TMYx (as well as TMY3) do not provide wet-bulb values

- **Will wet bulb data be provided?**
 - The scope of this study was to provide the same info as the info provided by TMY3.
- **If not, what is the standard methodology for calculating the wet bulb temperature?**
 - DNV recommends that people should use the same methods they used to process TMY3 data.

10. A common practice in the industry is to use Bin Maker Pro to take traditional TMY3 data and create a bin table of the hourly averaged weather data put into 5 degree weather bins. If Bin Maker Pro is no longer a source of creating these bin tables will a standard tool be created to help make these bins?

Processing of TMYx data can be done in excel. If requested by PAs, DNV can create a tool that would allow users to create bins.