**<Fill in Assessment Area>**

**Probabilistic Assessment Overview**

* **General Overview –** Use this section to provide high-level summary of study results, noteworthy trends from 2018, model enhancements, etc. Please keep this paragraph to a maximum of five lines.
* **Modeling –** Use leading paragraph to explain the model used and system representation, e.g. x interconnected areas…
  + Annual peak demand in [Assessment Area] varies by ̴ ± [#]% of forecasted [Assessment Area] demand based upon the 90/10% percent points of load forecast uncertainty (LFU) distributions.
  + Thermal units in [Assessment Area] follow a [describe sequence…e.g. two-state on-or-off sequence based on Monte Carlo simulation], which utilizes [describe performance rates/durations], which on average is equivalent to de-rating [Assessment Area] thermal generating resources by ̴ [#]%.
  + Hydro units in [Assessment Area] follow a [describe sequence…e.g. 20% dispatch 80% remaining energy limited]. This is equivalent to limiting hydro by ̴ [#]% maximum annual output.
  + Variable energy resources (wind & solar) in [Assessment Area] are a [load modifier or capacity resource] and [describe modeling sequence/approach], which is ̴ [#]% capacity credit.
  + [Other areas of interest]
* **Probabilistic Vs. Deterministic Assessments –** Use this leading paragraph to explain high-level differences in addition to bulleted items below.
  + If applicable, differences in treatment of demand
  + If applicable, differences in treatment of variable energy resources
  + If applicable, differences in treatment of demand response
  + If applicable, differences in treatment of transmission constraints
  + If applicable, differences in treatment of firm and non-firm capacity transactions
  + [Other areas of interest]

|  |  |  |  |
| --- | --- | --- | --- |
| **Base Case Summary of Results** | | | |
| **Reserve Margin (RM) %** | | | |
|  | **2022\*** | **2022** | **2024** |
| Anticipated | **#.#%** | **#.#%** | **#.#%** |
| Reference | **#.#%** | **#.#%** | **#.#%** |
| ProbA Forecast Operable | **#.#%** | **#.#%** | **#.#%** |
| **Annual Probabilistic Indices** | | | |
|  | **2022\*** | **2022** | **2024** |
| EUE (MWh) | **#.##** | **#.##** | **#.##** |
| EUE (ppm) | **#.##** | **#.##** | **#.##** |
| LOLH (hours/year) | **#.##** | **#.##** | **#.##** |

**Base Case Study**

* Use this space to describe Base Case results in more detail than overview section.
* Results trending – Use this section to provide an explanation of results changes from 2018 to 2020.

**If the Probabilistic Base Case results indicated loss of load hours (LOL) outside of the on-peak hour, please explain or describe the following, as applicable:**

* Month of loss of load occurrences and/or contributing factors
* Time of day of occurrence(s) and/or contributing factors *(e.g. morning, afternoon, evening, overnight)*
* Any reliability factors or reliability risk drivers that created additional loss of load or resource adequacy risk at the non-peak hours
* Any proposed resource, system changes, or planning strategy that may help mitigate loss of load or resource adequacy risks. These could be based on LTRA or Probabilistic Assessment Base Case results.
* [Other trends or areas of interest]

*On a voluntary and supplemental basis, please consider any hourly resource/demand analysis (qualitative) or data (quantitative) to support the response in describing the non-peak hour reliability risks.*

*Potential drivers could include responses from the 2020 LTRA narrative request, such as:*

* Off-peak capacity limitations (e.g., solar PV reductions in non-peak hours)
* Off-peak demand changes (e.g., large motor loads increase in non-peak hours)
* Limited fuel or energy availability
* Resource outages different from the reported peak hour
* [Other areas of interest]

**If the Probabilistic Base Case results indicated Expected Unserved Energy (EUE), please explain or describe the following, as applicable:**

* Month, magnitude, duration and/or contributing factors
* Time of day of occurrence(s) and/or contributing factors *(e.g. morning, afternoon, evening, overnight)*
* Any reliability factors or reliability risk drivers that created additional loss of load or resource adequacy risk at the non-peak hours
* Any proposed resource, system changes or planning strategy that may help mitigate loss of load or resource adequacy risks. These could be based on LTRA or Probabilistic Assessment Base Case results.
* [Other trends or areas of interest]
* *On a voluntary and supplemental basis, please consider any hourly resource/demand analysis (qualitative) or data (quantitative) to support the response in describing the non-peak hour reliability risks.*

**Please describe any key methods and assumption differences between the 2020 LTRA and ProbA Assessments.**

**Describe any probabilistic resource adequacy studies conducted by your area that address Area reliability risk drivers. Please consider the following, where applicable:**

* Description of the off-peak risk
* Description of the purpose of the study, where/how applied and periodicity
* Provide an overview similar to the “Probabilistic vs. Deterministic Assessments” that relates this study to the Probabilistic Assessment.
* Please provide a link(s) to where the studies are reported or published
* [Other areas of interest]

**If the Probabilistic Base Case results do not indicate loss of load metrics in or outside of the on-peak hour, an additional narrative response is not required.** On a voluntary basis, please explain or describe the following as applicable:

* Time periods of (low hourly margin between projected resources and demand)
* System characteristics, programs, initiatives, and/or market design constructs that may be contributing to zero loss of load metrics in or outside the peak hour.
* If applicable, please provide sufficient information to explain or highlight how the Assessment Area has addressed resource adequacy concerns in previous probabilistic assessments or studies.
* [Other areas of interest]

**Regional Risk Scenario**

Please use this space to describe and detail the pre-selected 2020 ProbA Regional Risk Scenario. If applicable, please describe the differences between the Base Case and the Regional Risk Scenario akin to the “Probabilistic vs. Deterministic” section above. Responses should consider:

* Why the specific scenario was chosen for this Assessment Area
* Overview methodology or assumptions intended for the Regional Risk Scenario
* Why the Regional Risk Scenario Study Years were selected *(e.g. “Years 2 and 4” versus “Year 4 only”)*
* Any issues or items to note pertaining to the changing resource mix for the study years selected
* If applicable, how does this Regional Risk scenario address Energy Adequacy concerns or off-peak hour risks
* If applicable, describe if the selected Regional Risk Scenario was informed by risk seen in a previous Long Term Reliability Assessments or Probabilistic Assessments
* Any key methods and assumptions differences with the 2020 ProbA Base Case and LTRA
* [Other areas of interest]