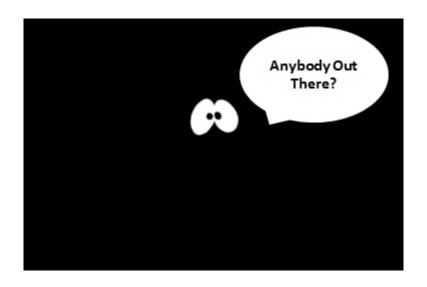
Preliminary Resource Adequacy Assessment for 2020



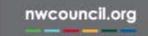
RAAC Technical Committee Meeting February 12, 2015



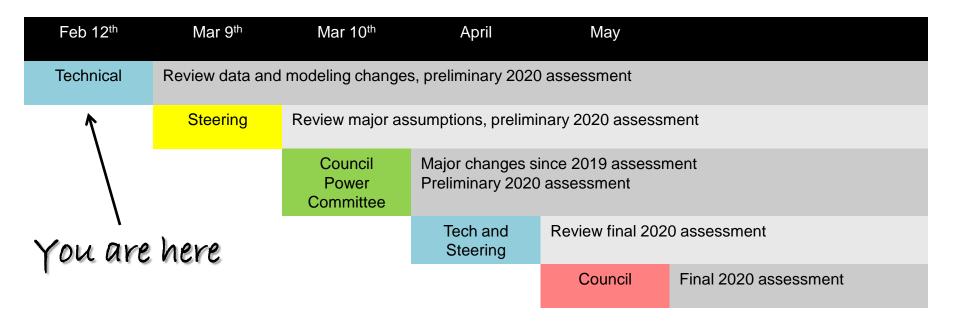


Outline

- 1. Schedule
- 2. Data Updates 2019 to 2020
- 3. Modeling Changes
- 4. Preliminary Results for 2020



Schedule for 2020 Assessment



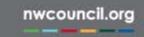


Load Forecast used in GENESYS

- 2020 load 310 MWa lower than 2019 load¹
 - 2019 forecast = 22,030 MWa
 - $2020 \text{ forecast}^2 = 21,720 \text{ MWa}$

- Load forecast dropped mostly due to decreases in employment estimates
- ¹ Average load across all hours of the year, over temperatures from 1929-2008
- ² Preliminary forecast for 2020 and will be updated prior to final assessment





Major Resource Changes

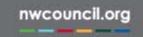
Loss: Big Hanaford at 248 MW

Hydro and Sustained Peaking

 New hydro regulation data implements the latest BiOp measures, which include summer bypass spill

- Sustained peaking:
 - 2019: Used min turbine flow for DEC
 - 2020: Incorporates 900/1100 INC/DEC into the optimization process





Modeling Changes for 2020

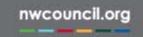
Modified purchase-ahead logic

- Now allows purchase ahead for anticipated shortfalls in month, window and day
- Off-peak hours only
- Limited by south-to-north tie limits

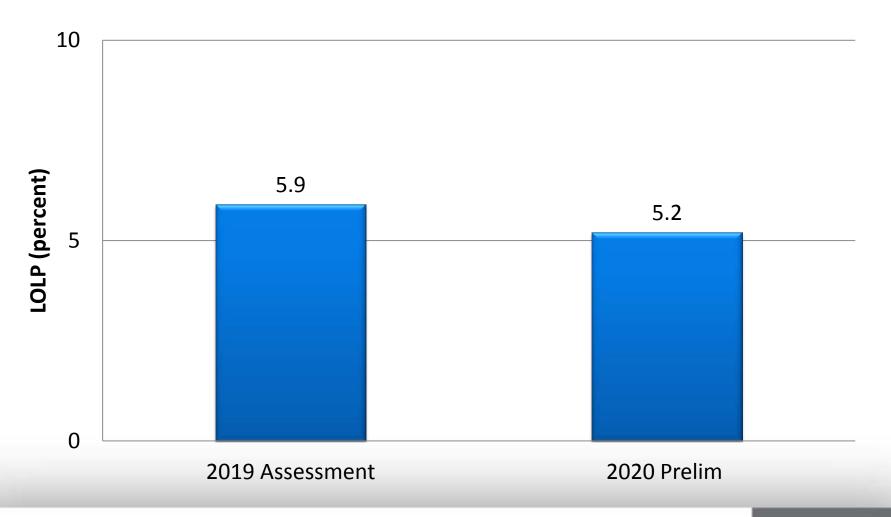
Redefined the dispatch window

- Changed from 2-day to 7-day window
- Lines up better with operating procedures
- Allow winter spot market (on-peak) purchases for all hours of the day





2020 Preliminary Assessment





Preliminary Results for 2020

Load	-2.5%	-1.5%	0%	+1.5%	+2.5%
Import (MW)					
0					
1700					
2500			5.2%		
3400					
4500					