WESTERN RESOURCE ADEQUACY PROGRAM

Review of preliminary, non-binding WRAP regional data for the current participating footprint for the Winter 2026-2027 Season

June 25, 2025

Today's Objectives

- Provide an overview of:
  - the loads and resources in the WRAP Region
  - installations and nameplate for wind and solar
  - the Qualifying Capacity Contributions (QCC) and Effective Load Carrying Capability (ELCC) values for each resource type
  - Forward Showing Planning Reserve Margin (FSPRM) values

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REMINDERS

- Modeling assumes full binding implementation of the WRAP design
  - Metrics assume diversity benefit and a level of forward procurement on aggregate that is not presently expected without binding implementation of the WRAP
- Modeling was performed based on the WRAP Region in early 2024
  - These assessments cannot account for adequacy needs or activities of non-participating load or resources
- Be aware of the limits of drawing regional conclusions from aggregate information
  - Information is best applied at the level of individual LREs; WRAP's scope does not include matching LREs in need of additional forward procurement with available resources
  - It cannot be assumed that all resources modeled in the loss of load expectation (LOLE) study will be available to the WRAP Region
  - Planned outages are not considered; they will be managed by LREs from any surplus

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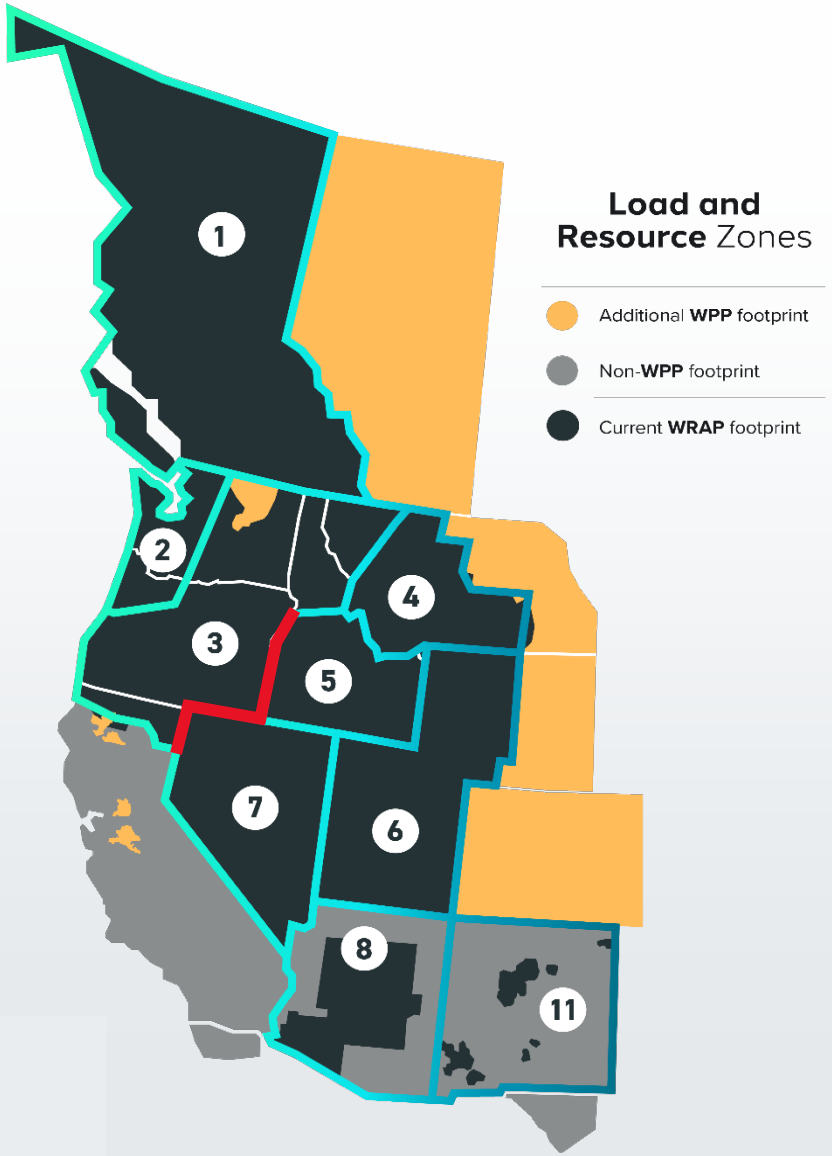
Load and Resource Zones



Subregion	Zone	Geographical Description
MidC	Zone 1	British Columbia
	Zone 2	West of Cascades
	Zone 3	East of Cascades
	Zone 4	NorthWestern
SWEDE	Zone 5	Idaho Power
	Zone 6	PacifiCorp East
	Zone 7	Nevada
	Zone 8	Arizona
	Zone 11	New Mexico

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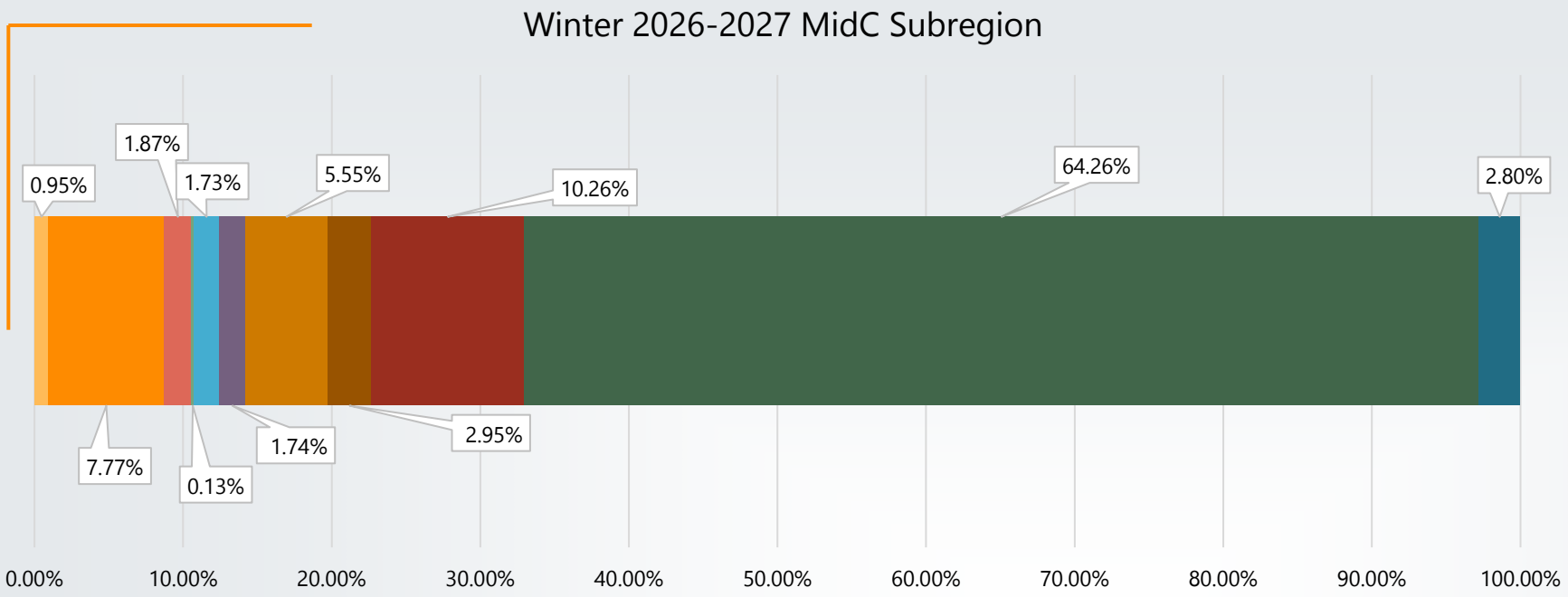
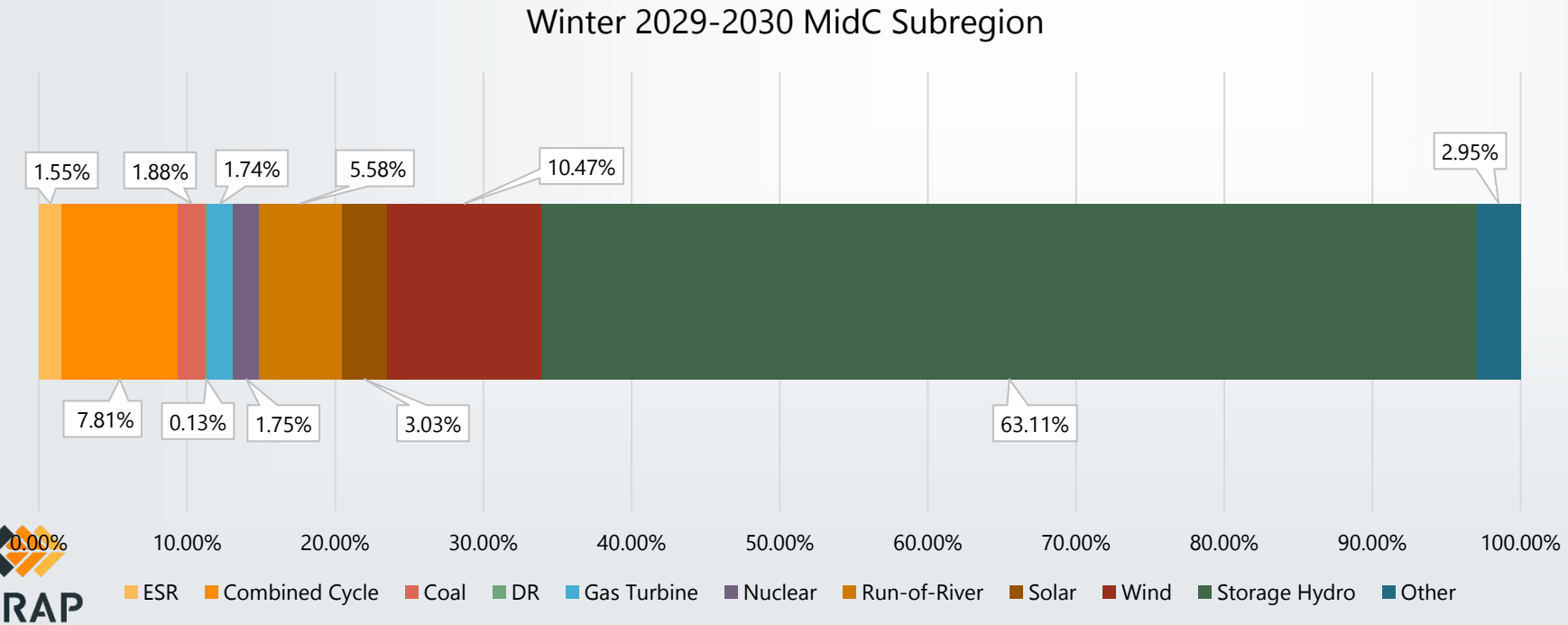
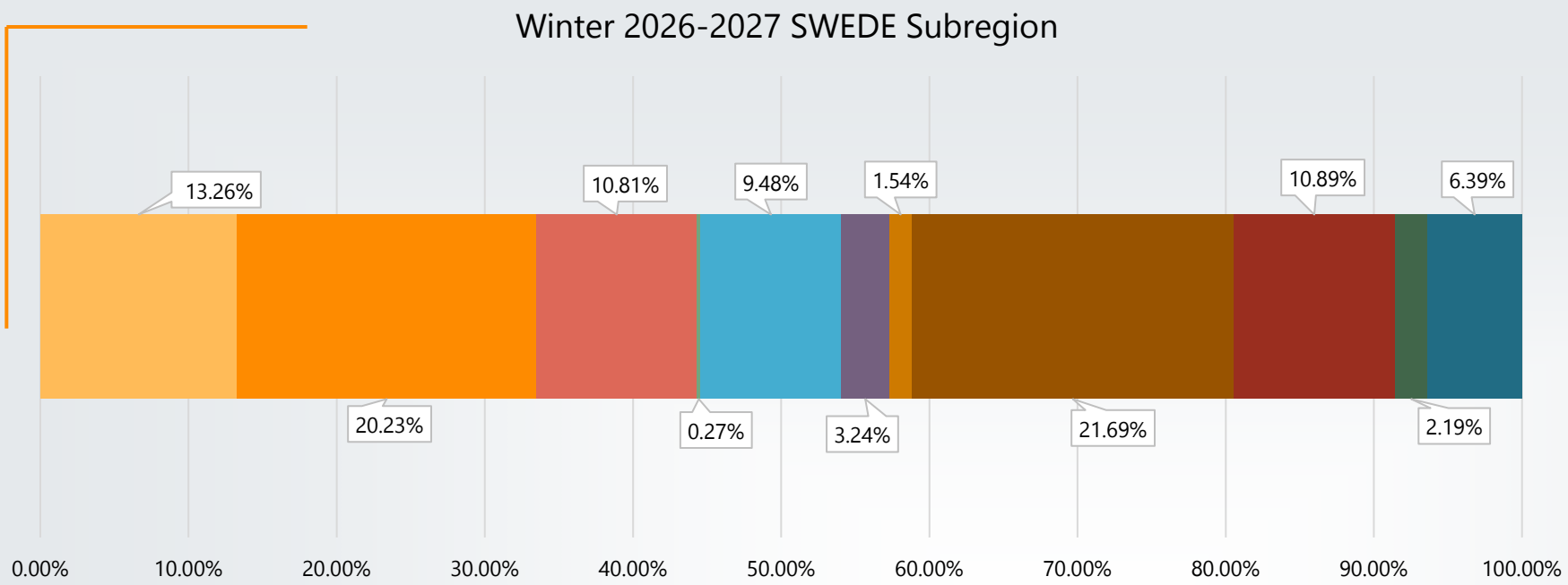
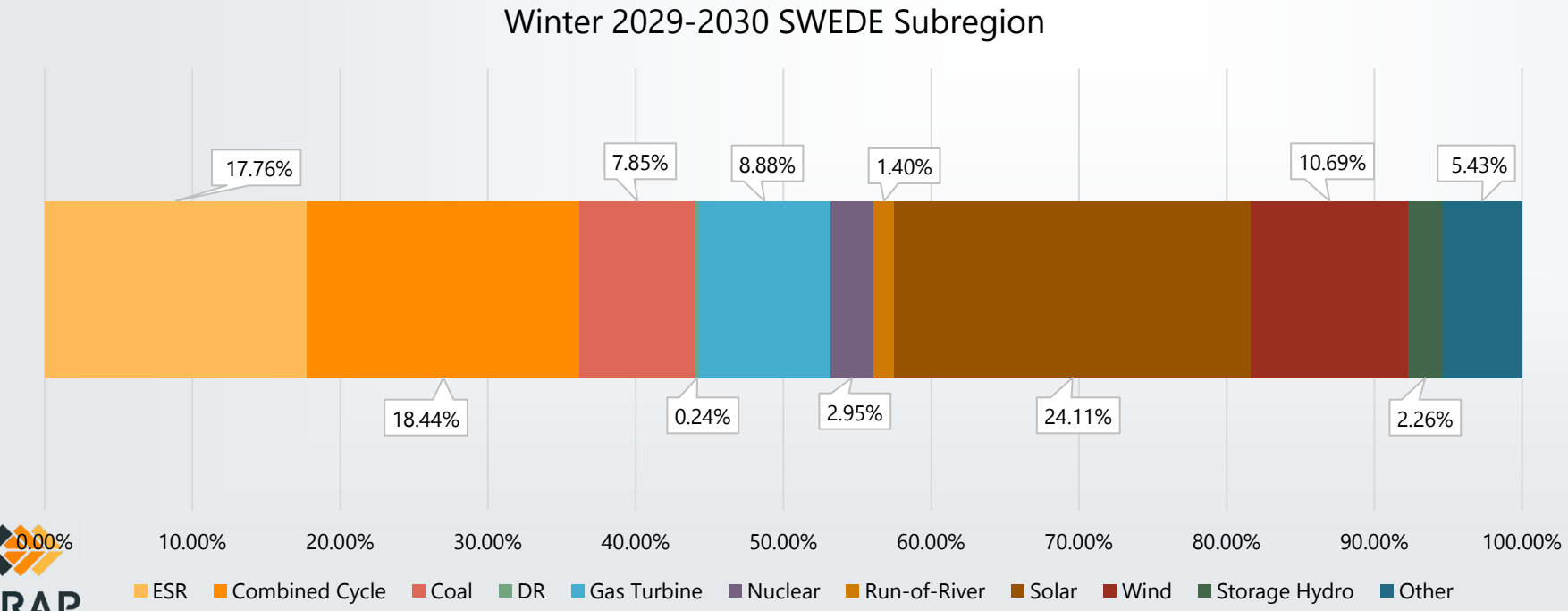




MidC Subregion Winters

Percentage

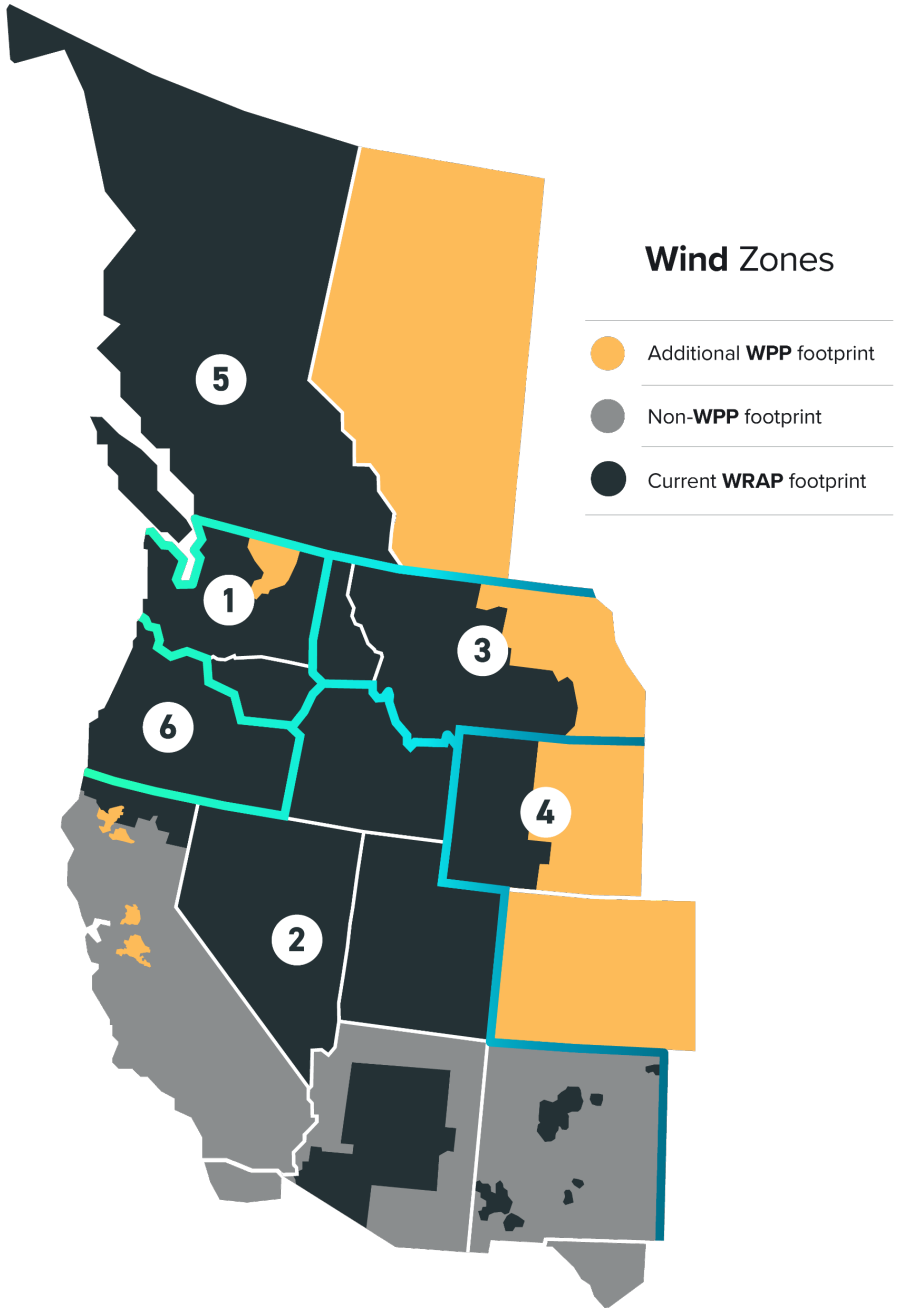




SWEDE SUBREGION WINTERS

Percentage

Wind Zones



Zone	Nameplate Capacity (MW)
Wind VER1	**4,825**
Wind VER2	**3,454**
Wind VER3	**1,544**
Wind VER4	**4,120**
Wind VER5	**747**
Wind VER6	No wind
Total	**14,690**

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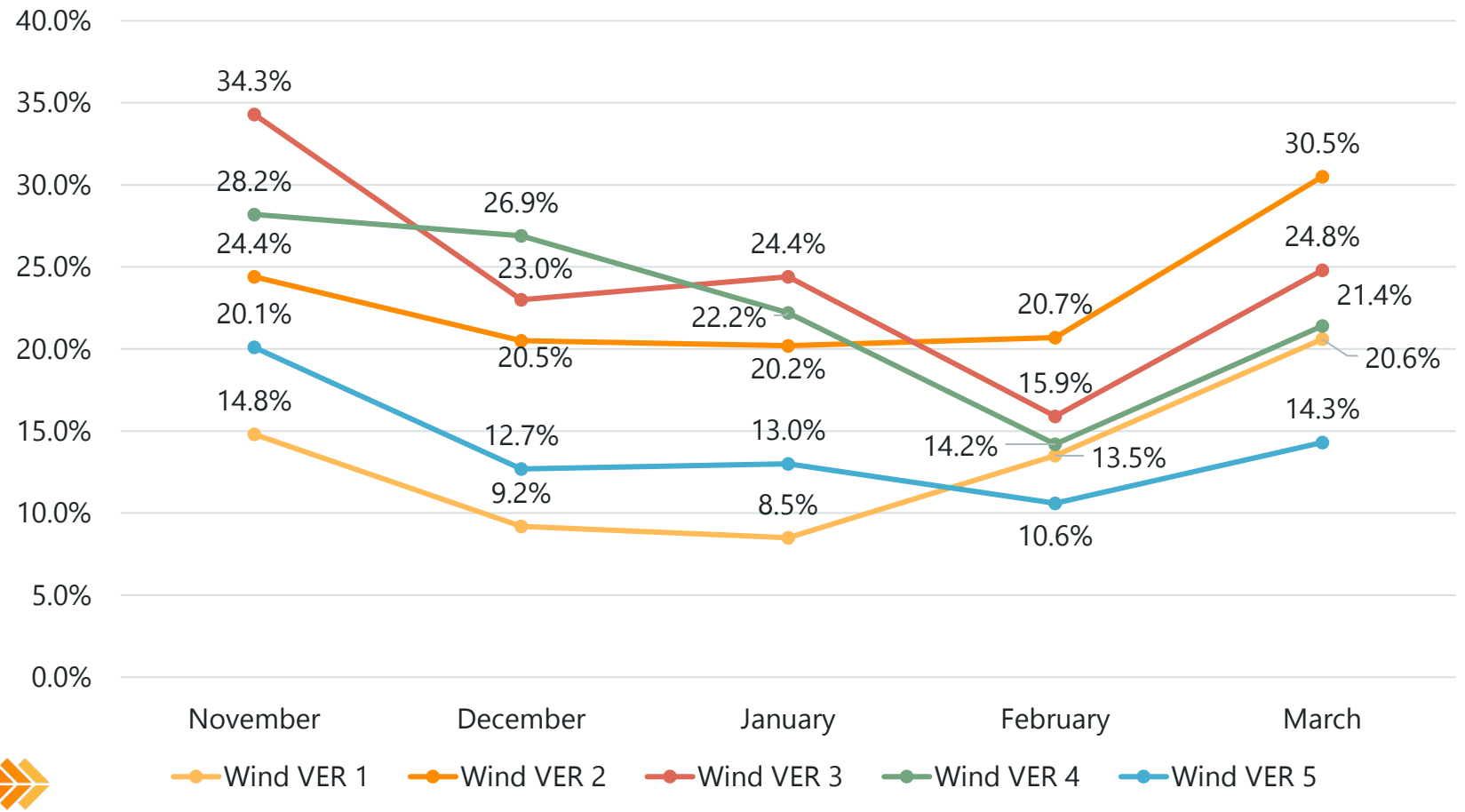
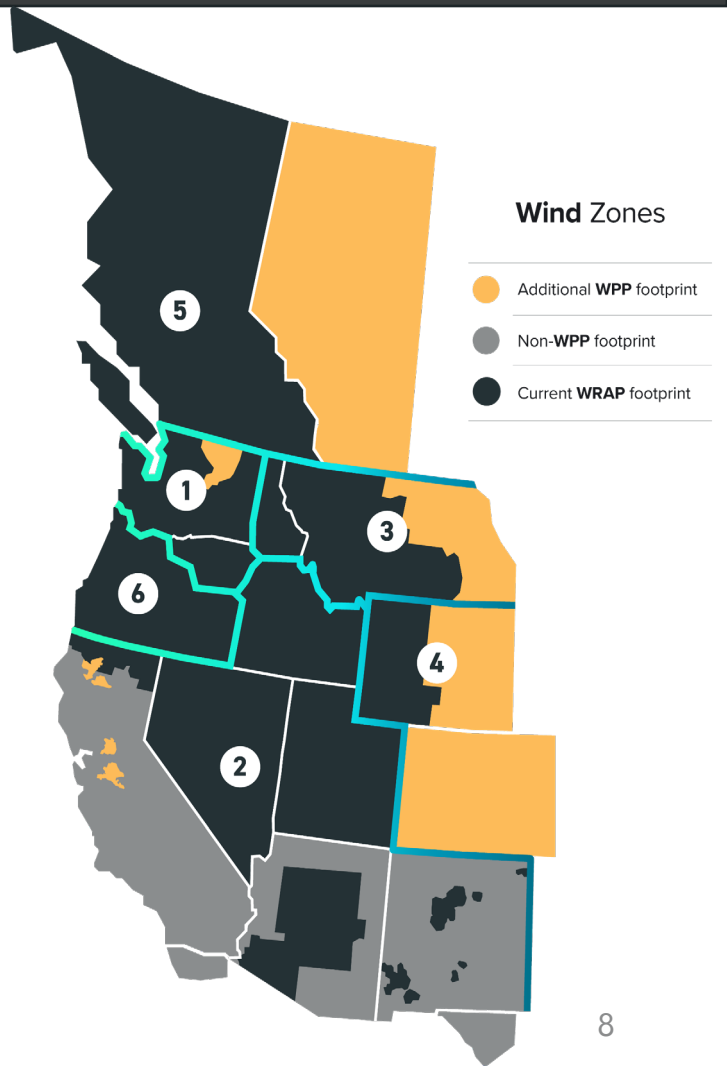
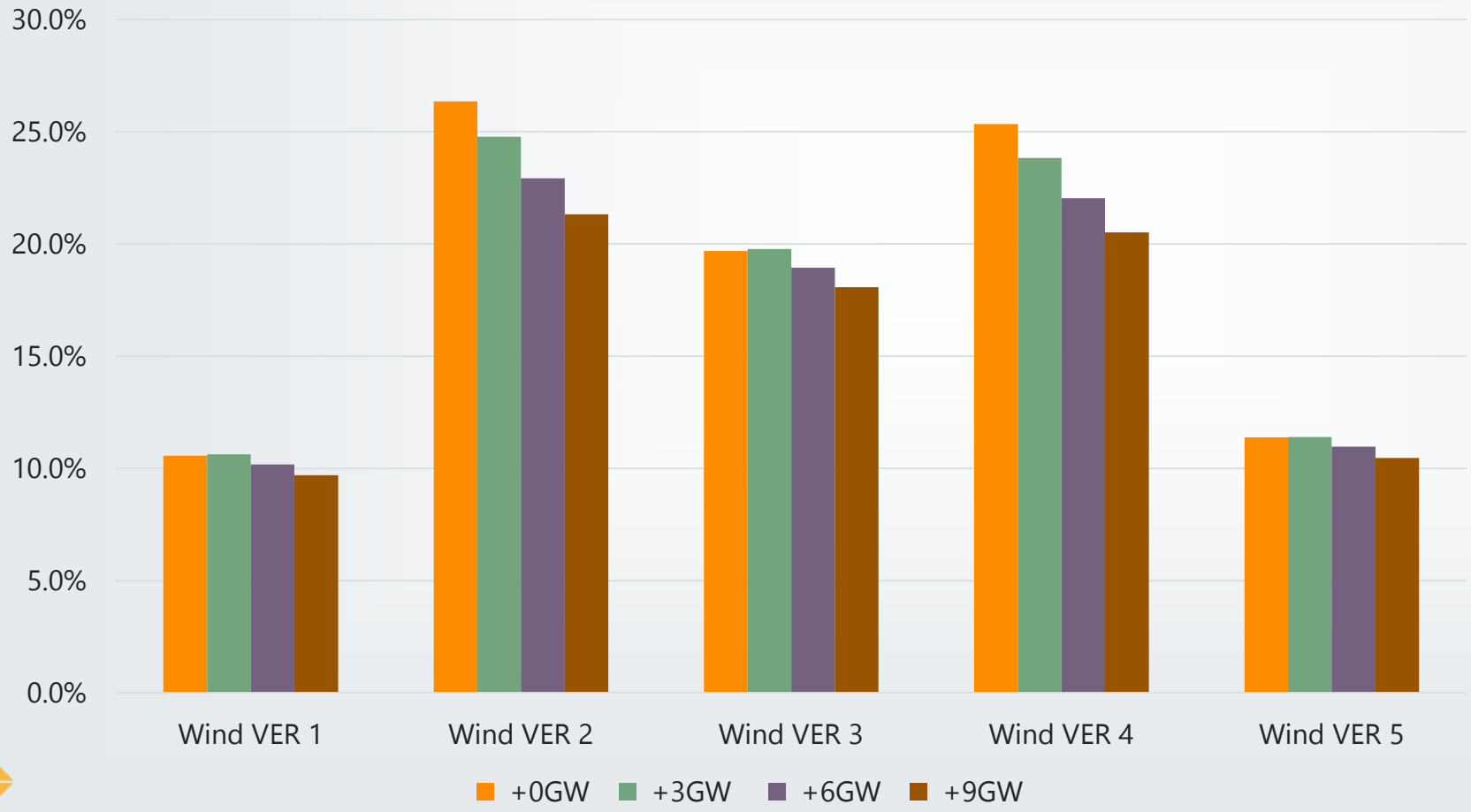
Wind ELCC - Winter

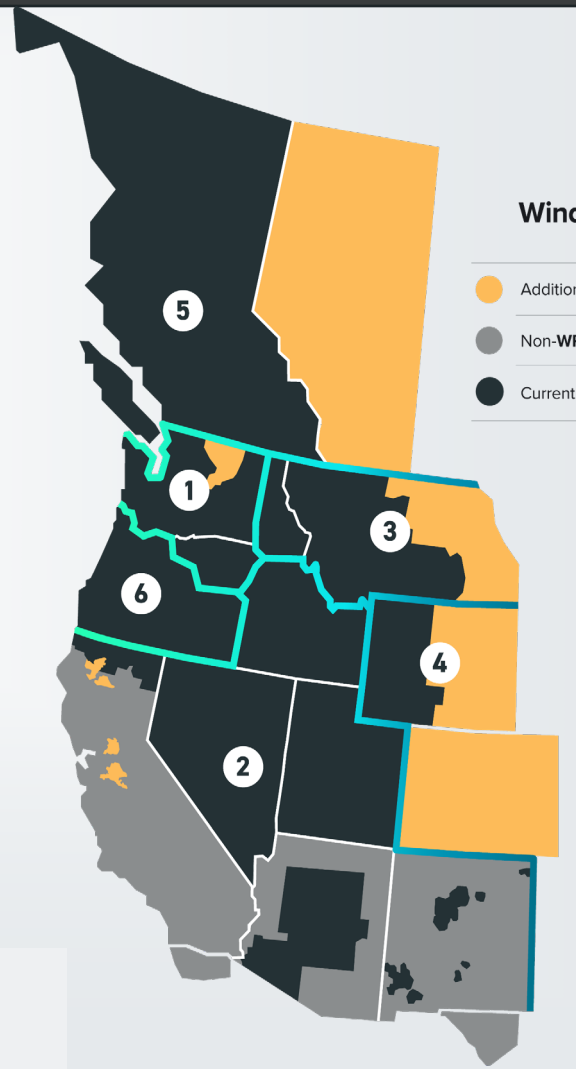




Wind ELCC

Wind at Incremental GW Installations





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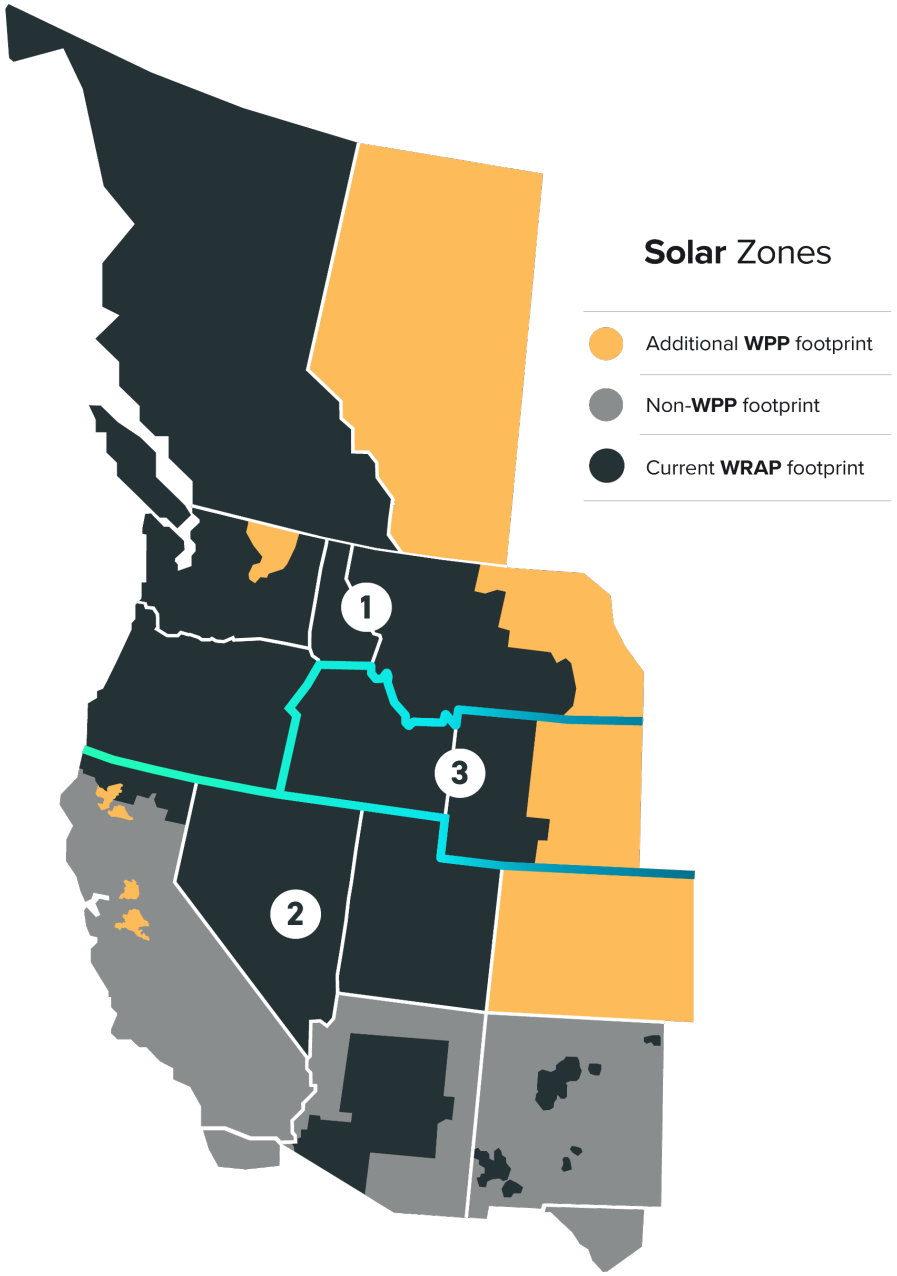
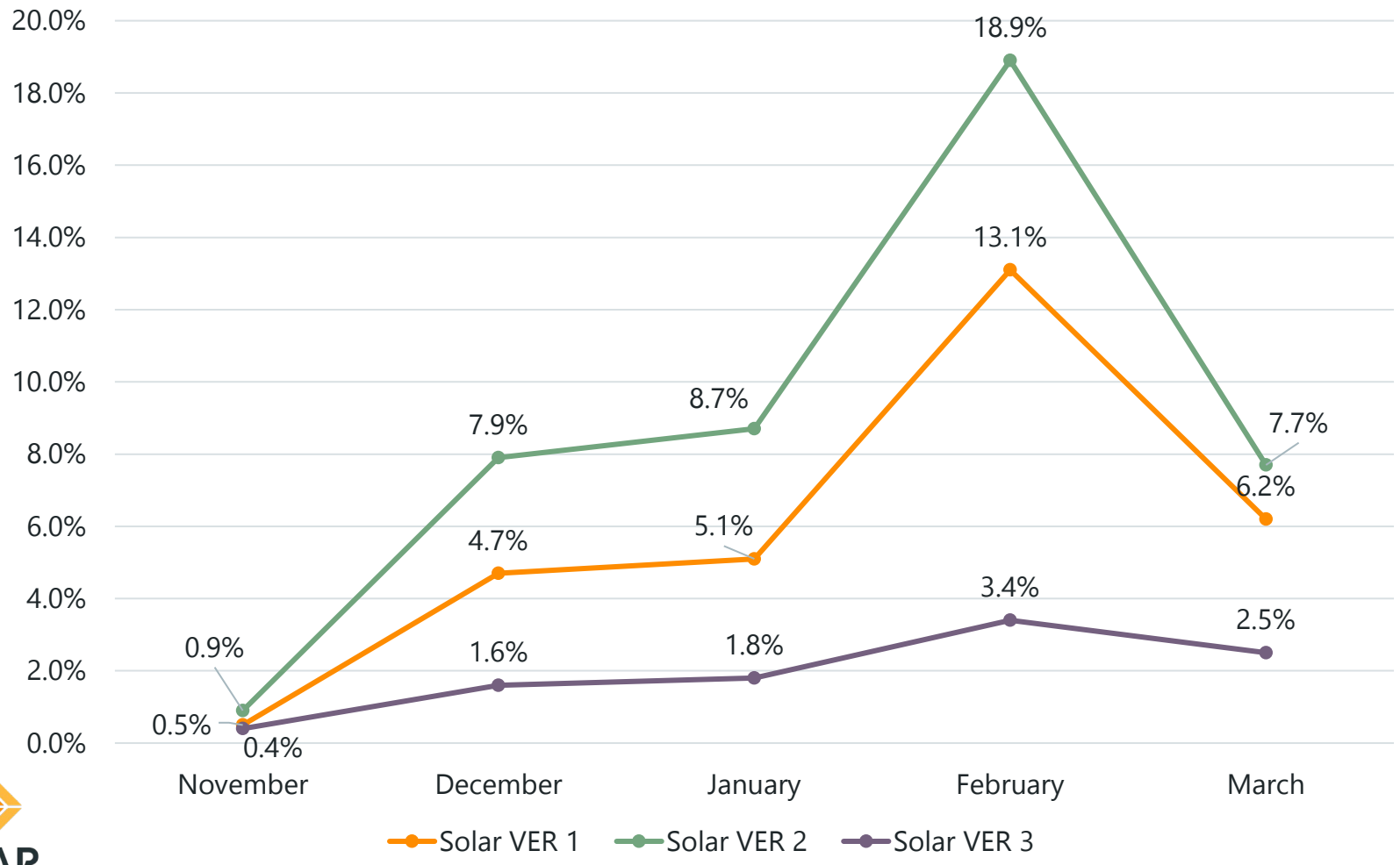
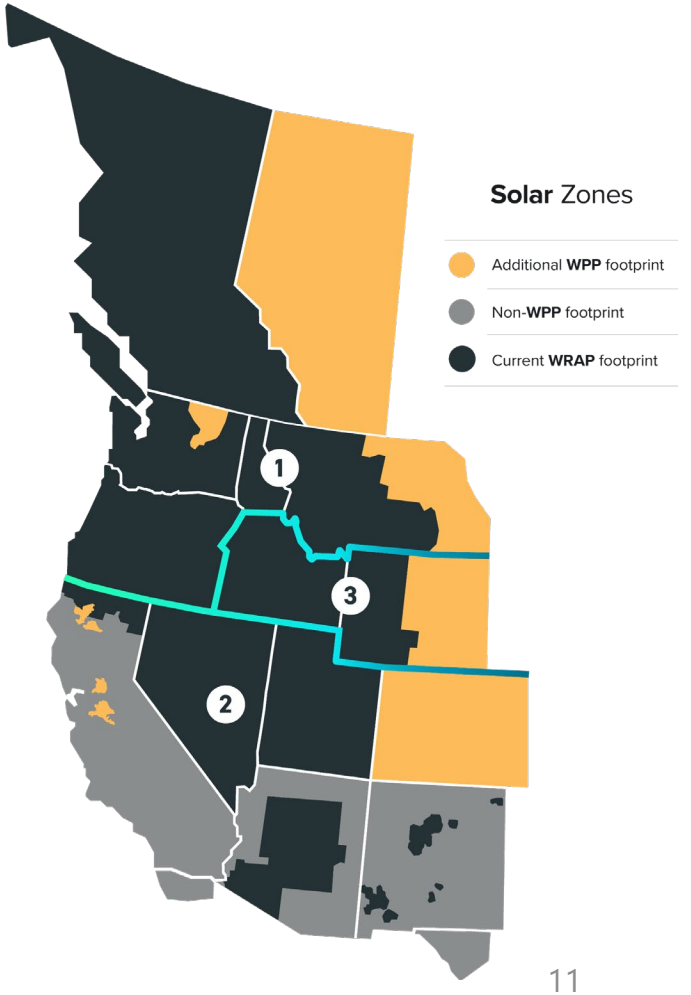
Solar Zones



Zone	Nameplate Capacity (MW)
Solar VER1	**2,046**
Solar VER2	**14,111**
Solar VER3	**969**
Total	**17,126**

Solar ELCC - Winter





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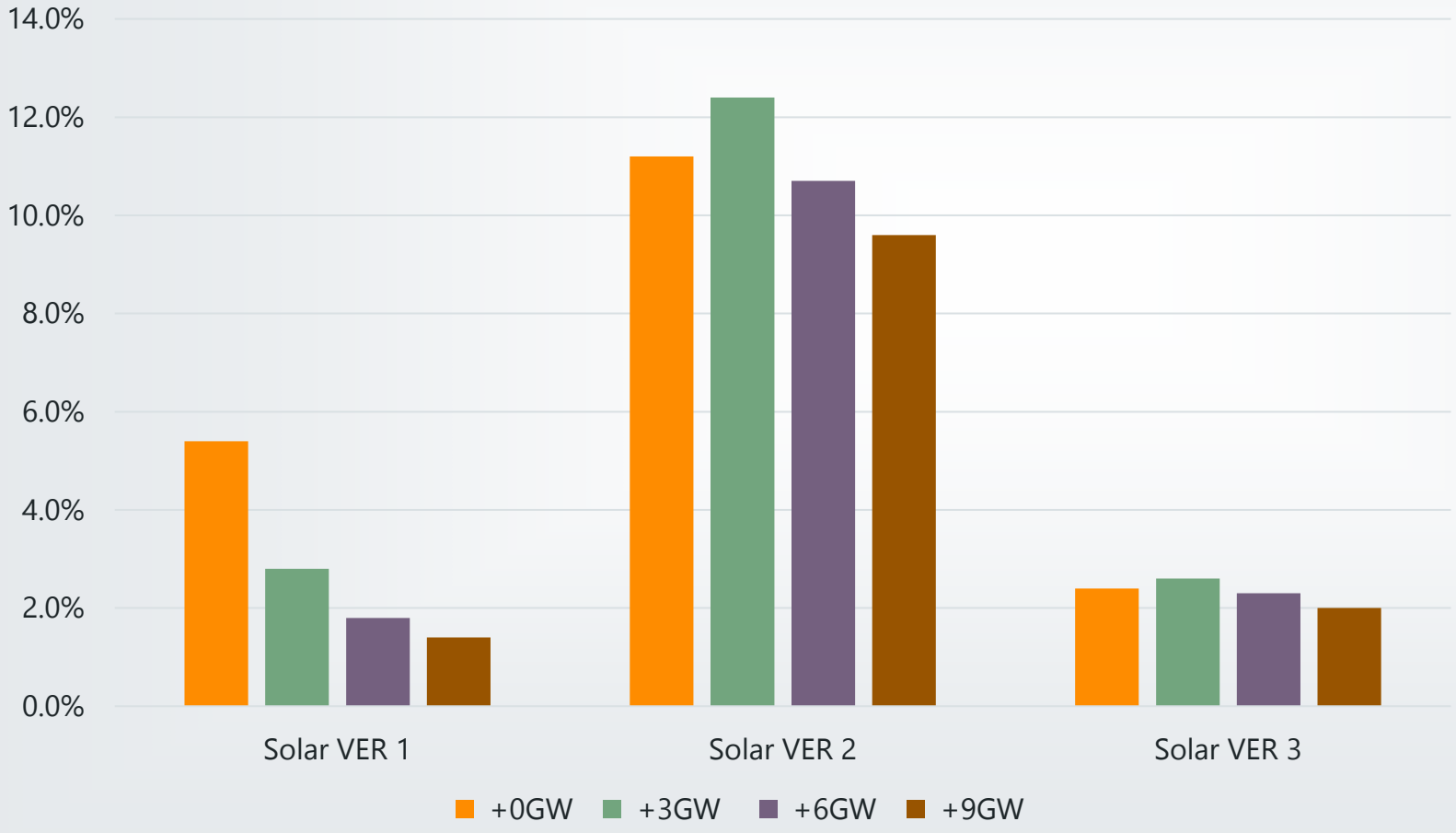
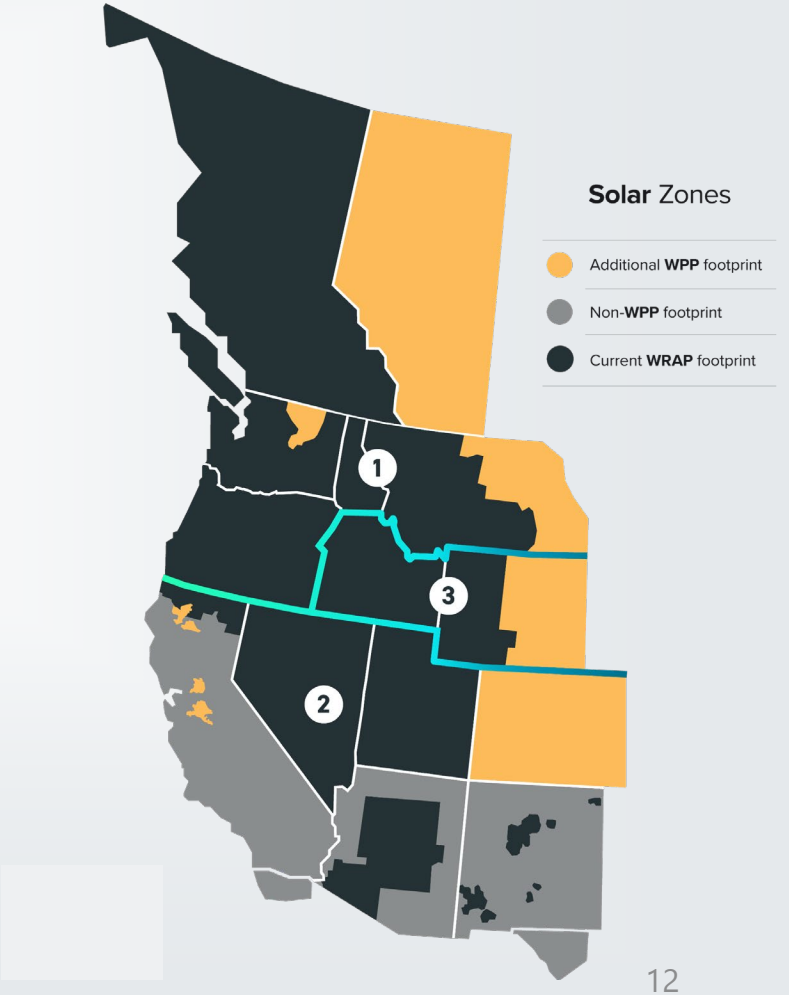
Solar ELCC

Solar at Incremental GW Installations





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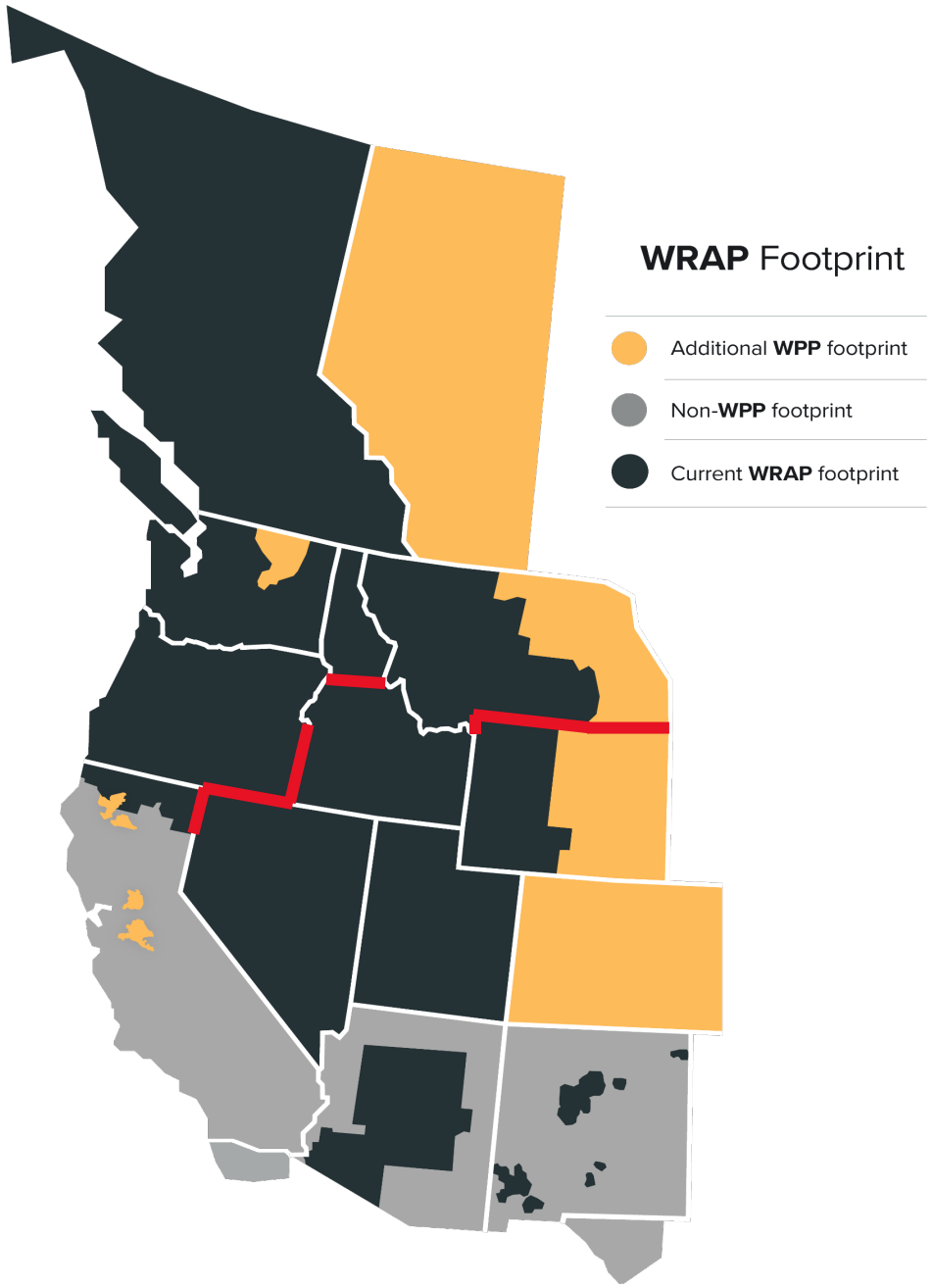
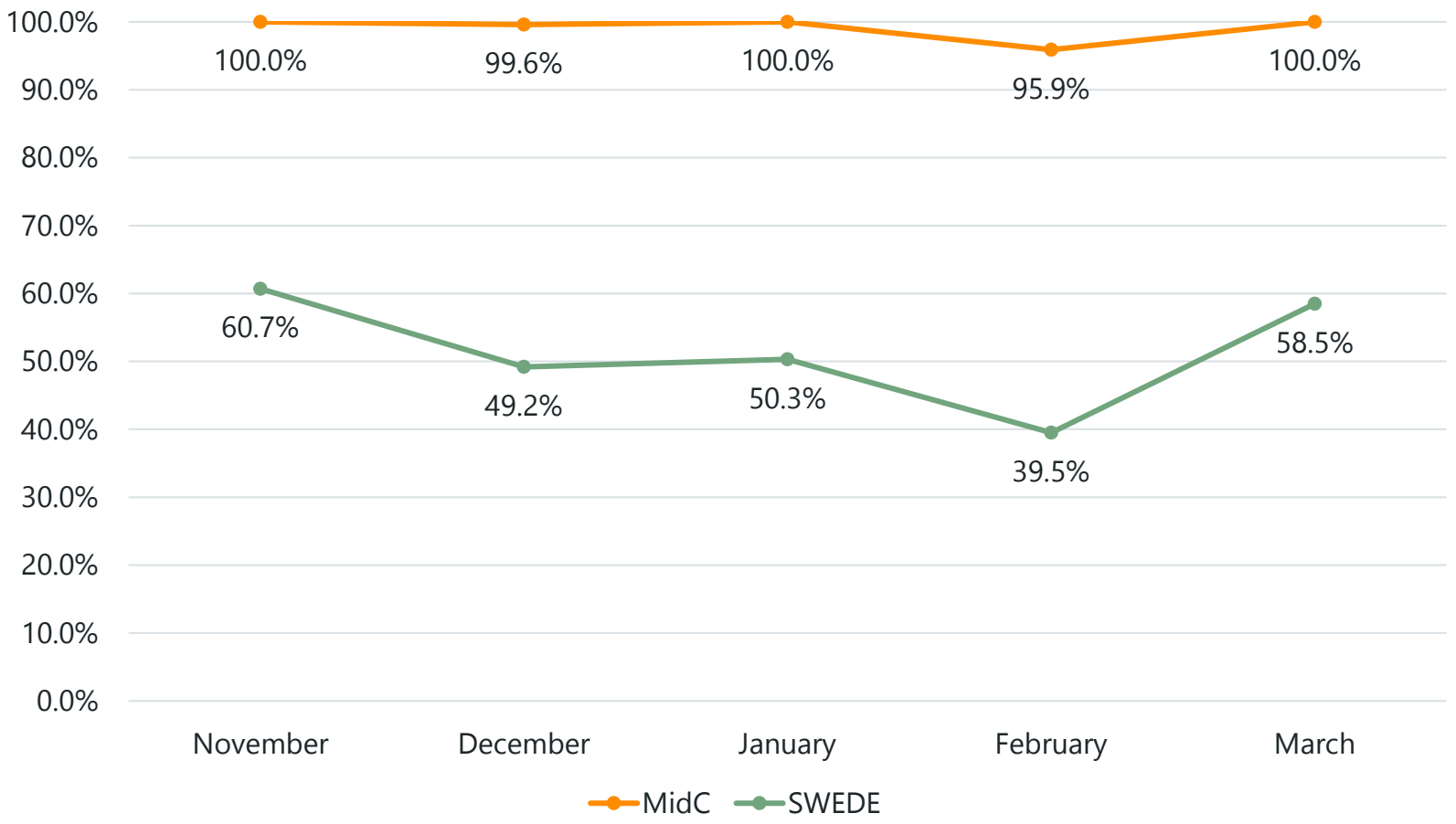
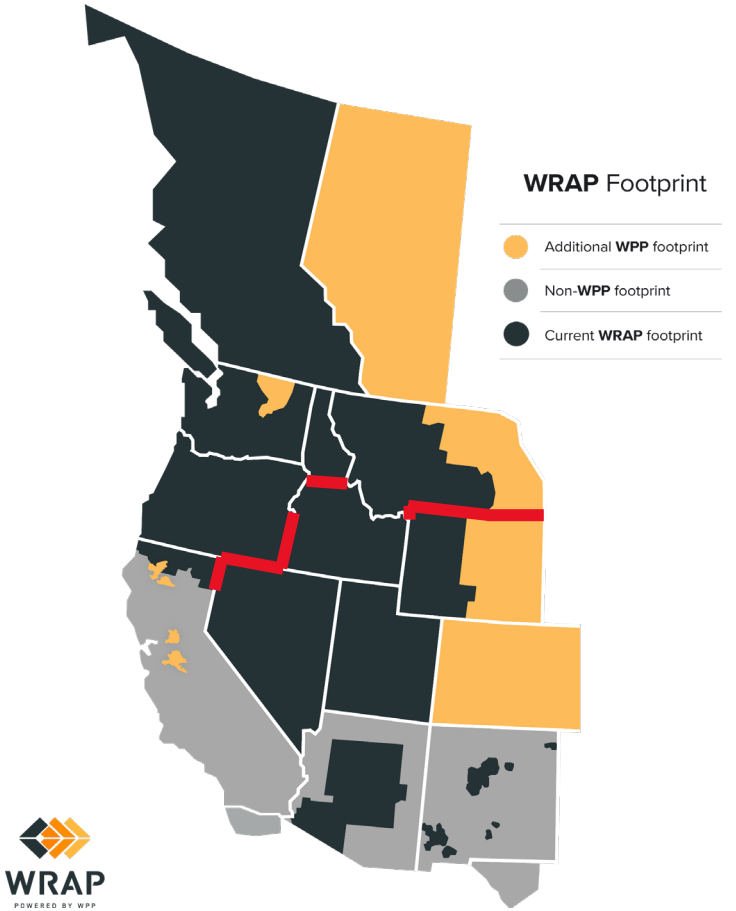
Energy Storage Resource (ESR) Zones



Subregion	Nameplate Capacity (MW)
MidC	**658**
SWEDE	**9,220**
Total	**9,878**

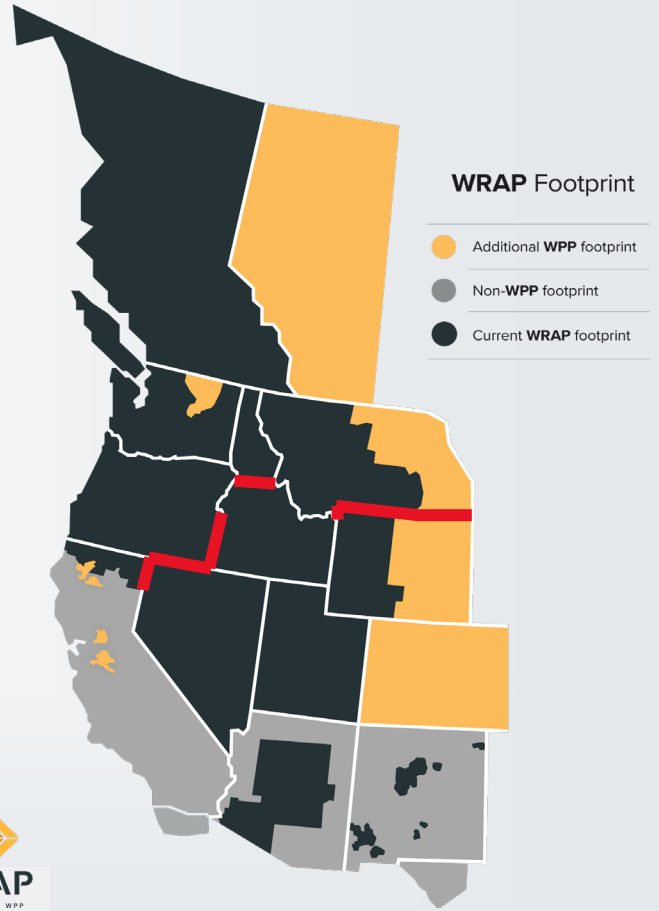
ESR ELCC - Winter



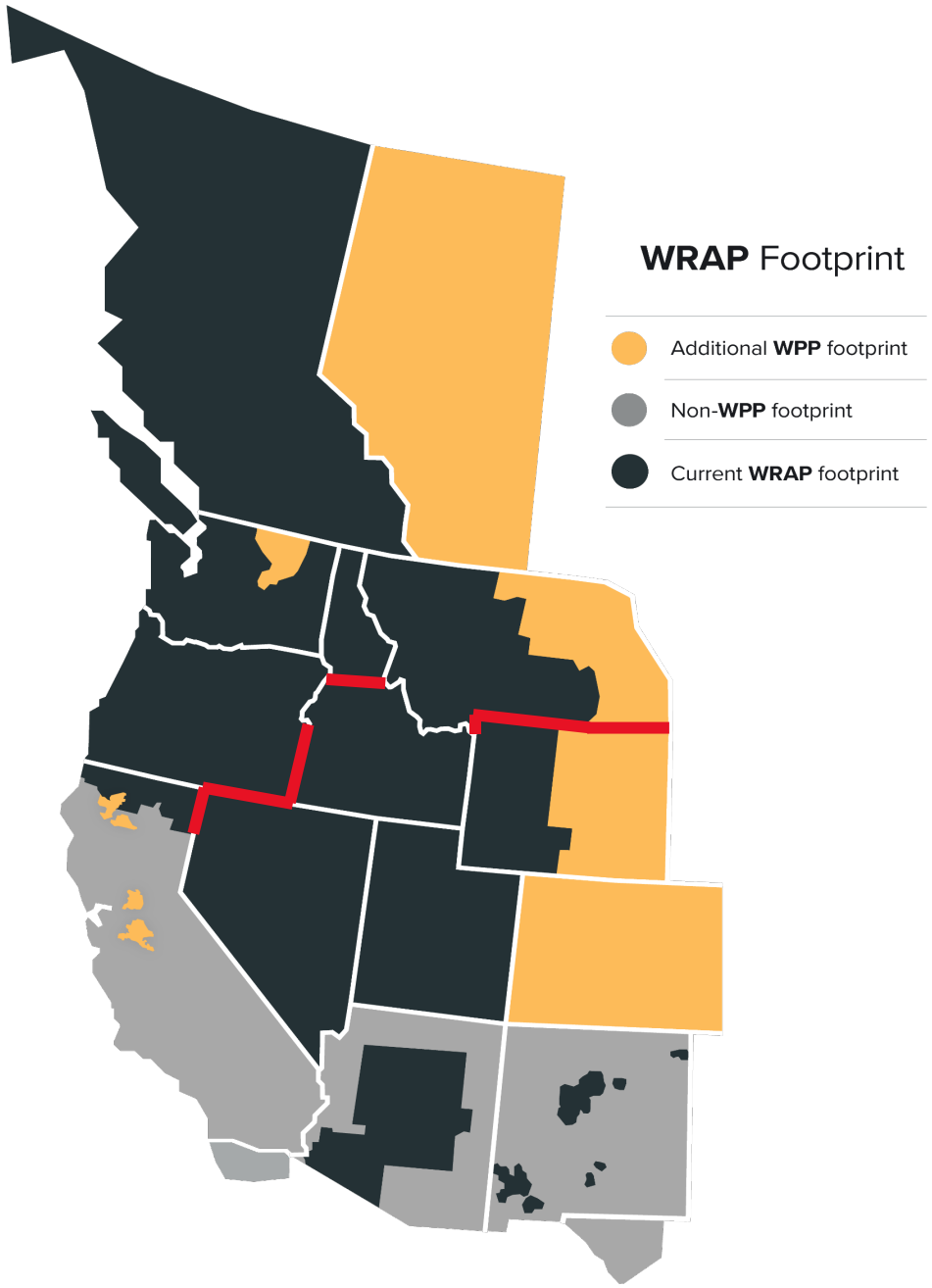


ESR ELCC

ESR at Incremental GW Installations

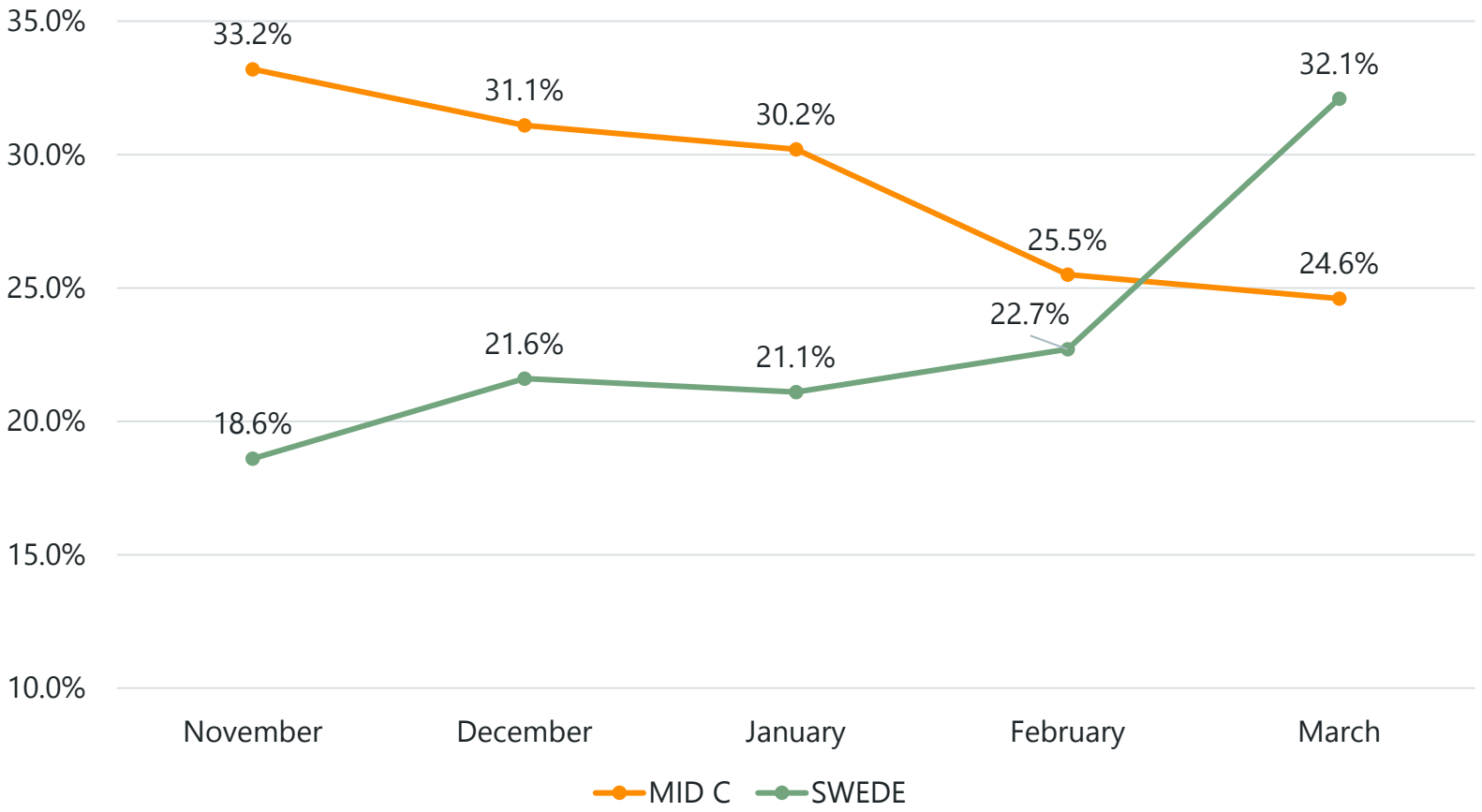


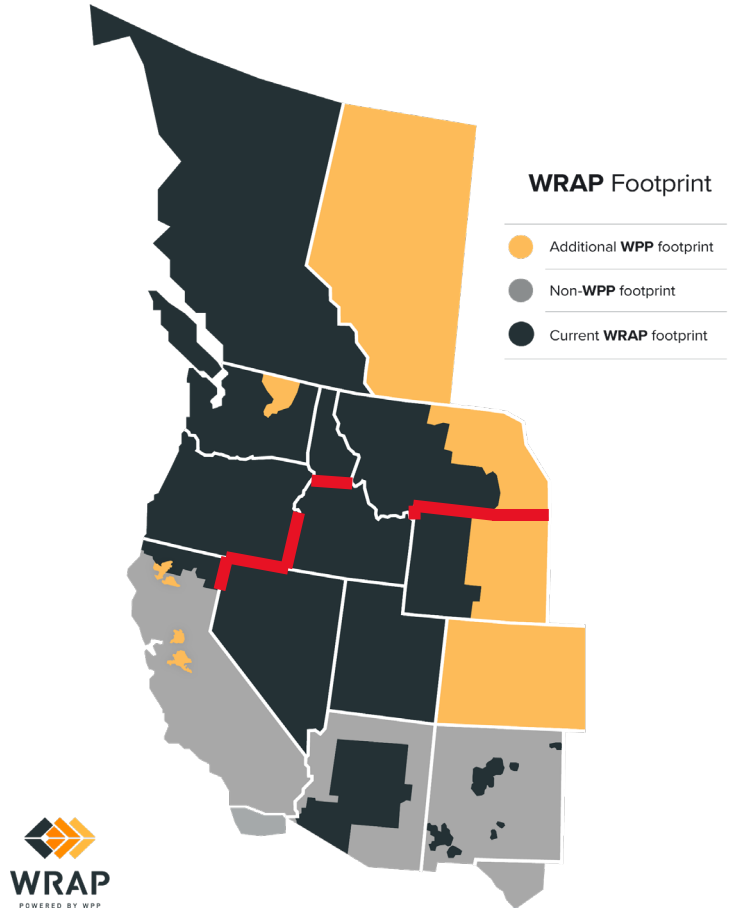
Run of River (RoR) Zones



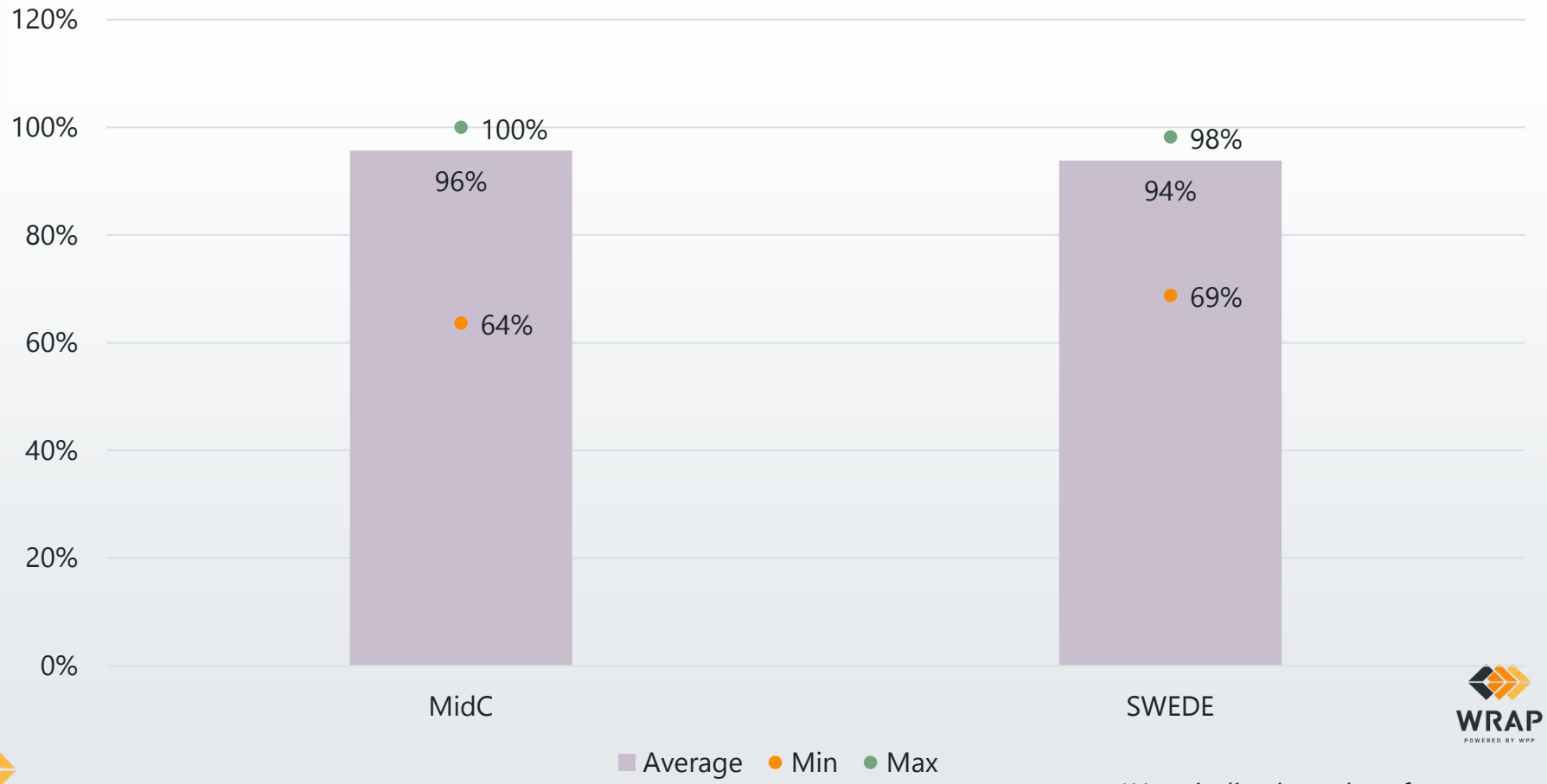
Subregion	Nameplate Capacity (MW)
MidC	**3,847**
SWEDE	**1,067**
Total	**4,920**

RoR QCC - Winter



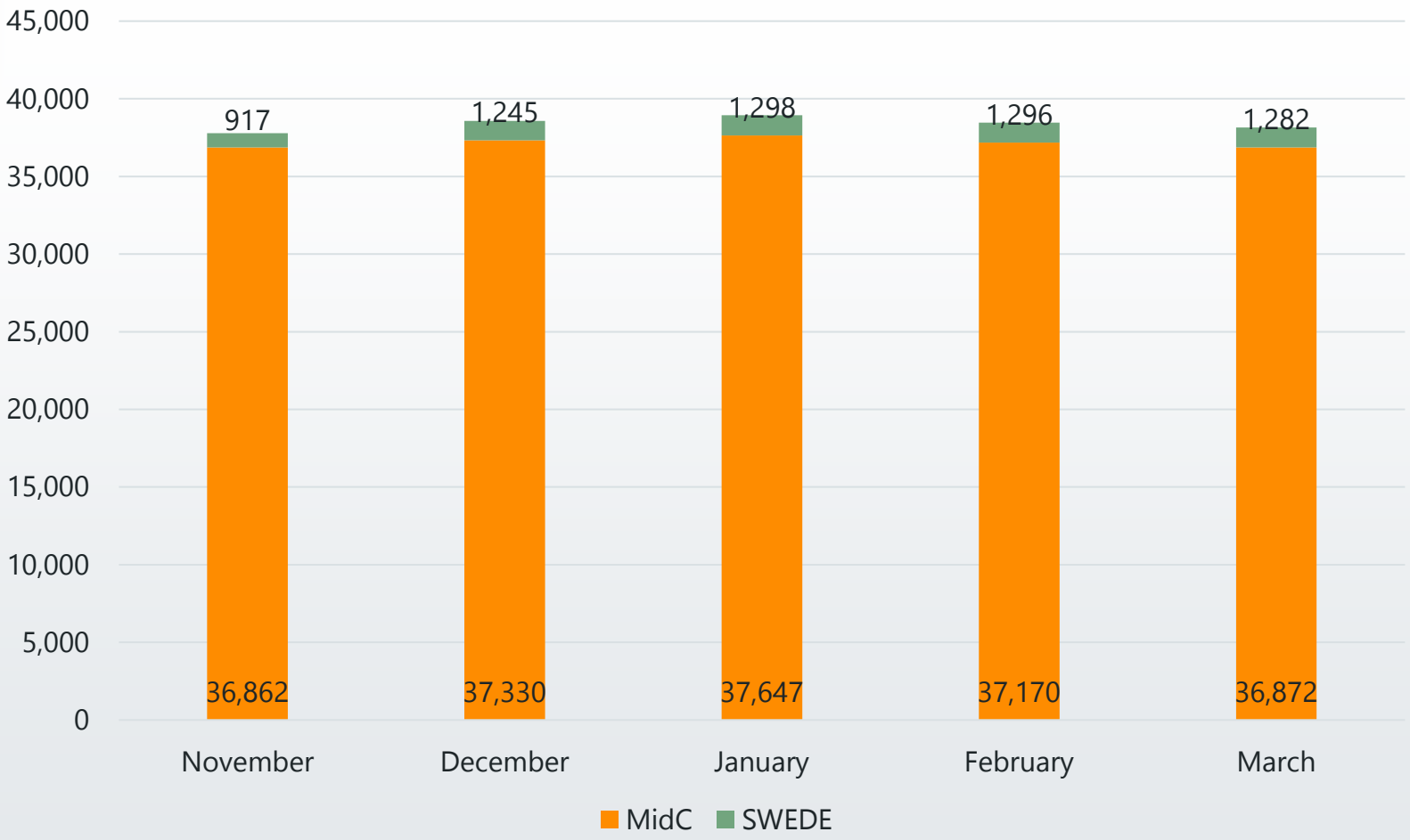


Thermal QCC



*Uses indicative values for resources that did not provide GADS data

Storage Hydro QCC MW



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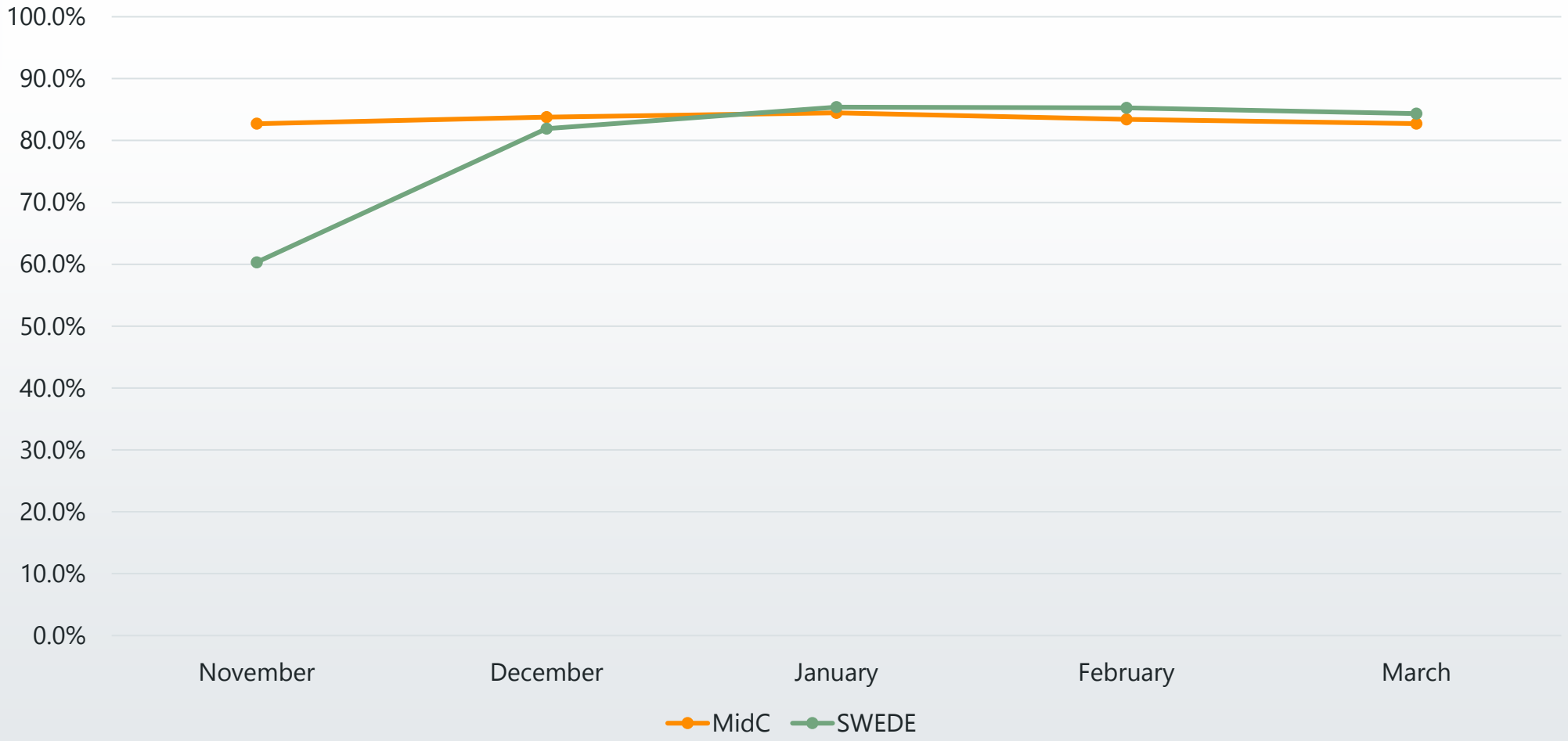
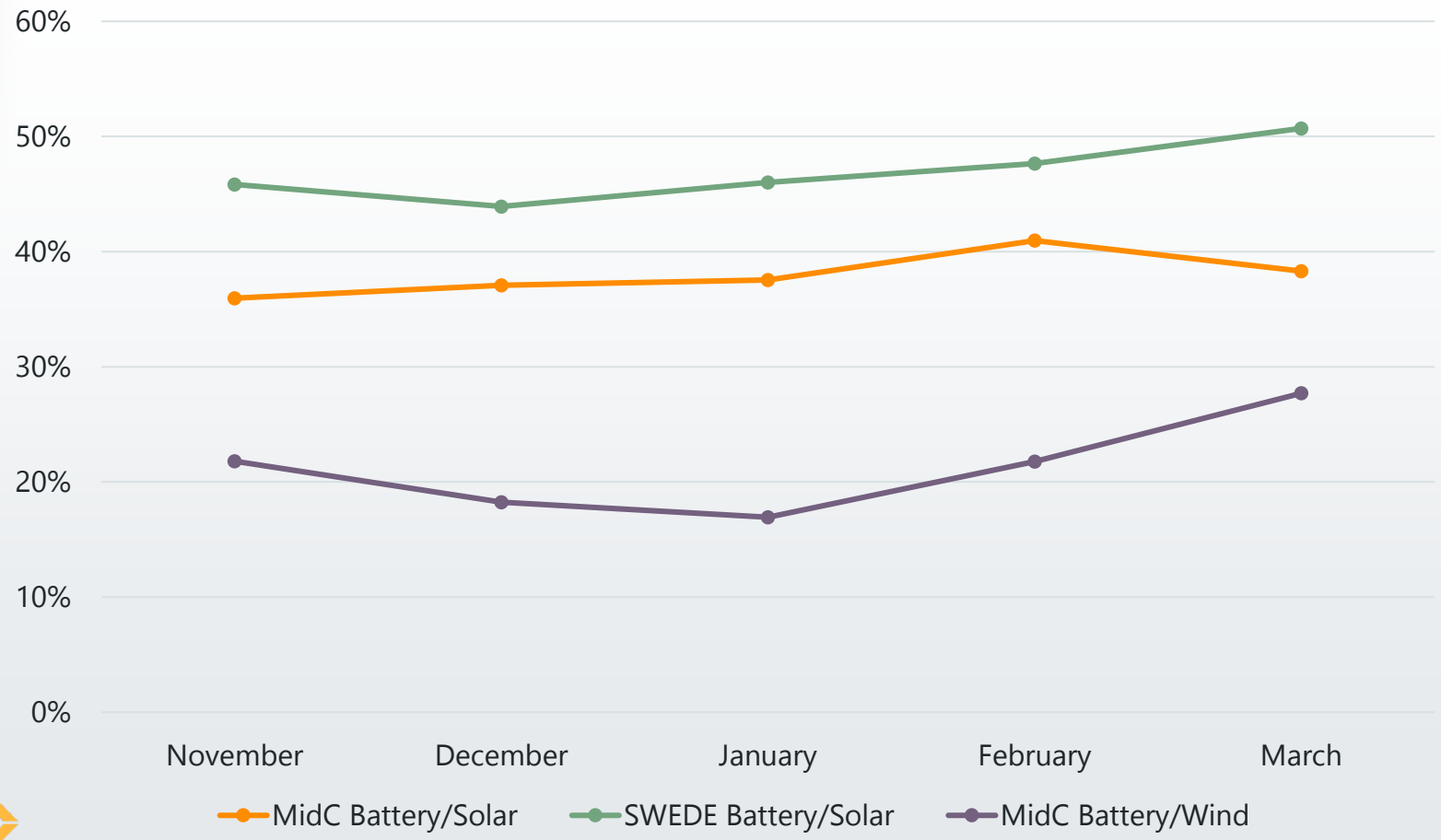
AVERAGE STORAGE HYDRO QCC



Hybrid Resource QCC



Number of installed pairings

	MidC	SWEDE
Battery/ Solar	4	48
Battery/ Wind	1	0

PRM Considerations

PRM Methodology

- Maintain 0.1 LOLE across the season
- Minimum of 0.01 LOLE in each individual month
- NCP load for a given month a significant factor in calculation of PRM (lower load months will have higher PRM value)

Based on Revised Transition Plan approved by Board Sept 19, 2024

- PRM calculation includes 500 MW of diversity sharing between Subregions **benefitting NW in Winter** *(SW in Summer)*

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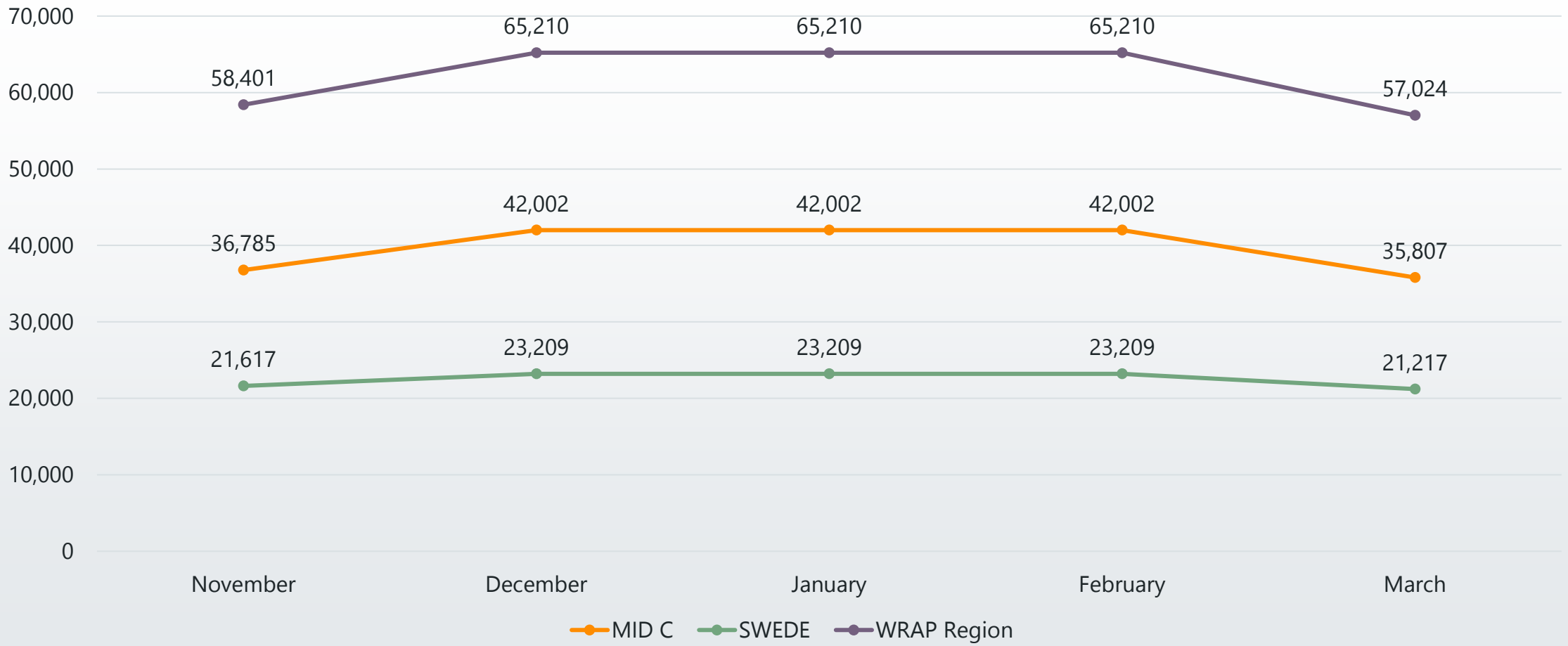
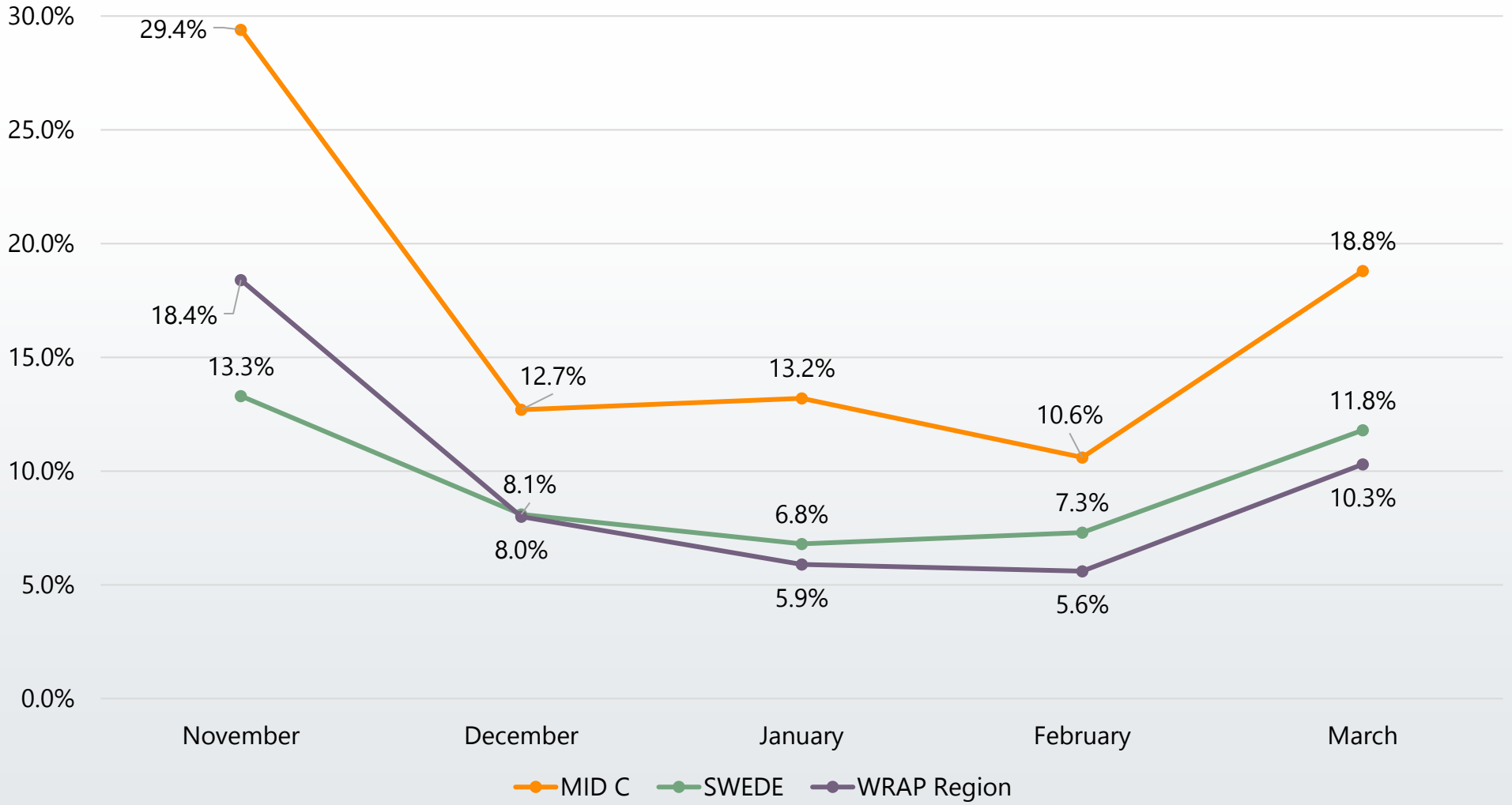
Peak Load


70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
65,210
65,210
65,210
58,401
57,024
42,002
42,002
42,002
36,785
35,807
23,209
23,209
23,209
21,617
21,217
November
December
January
February
March
MID C
SWEDE
WRAP Region

PRM – Winter 2026-2027



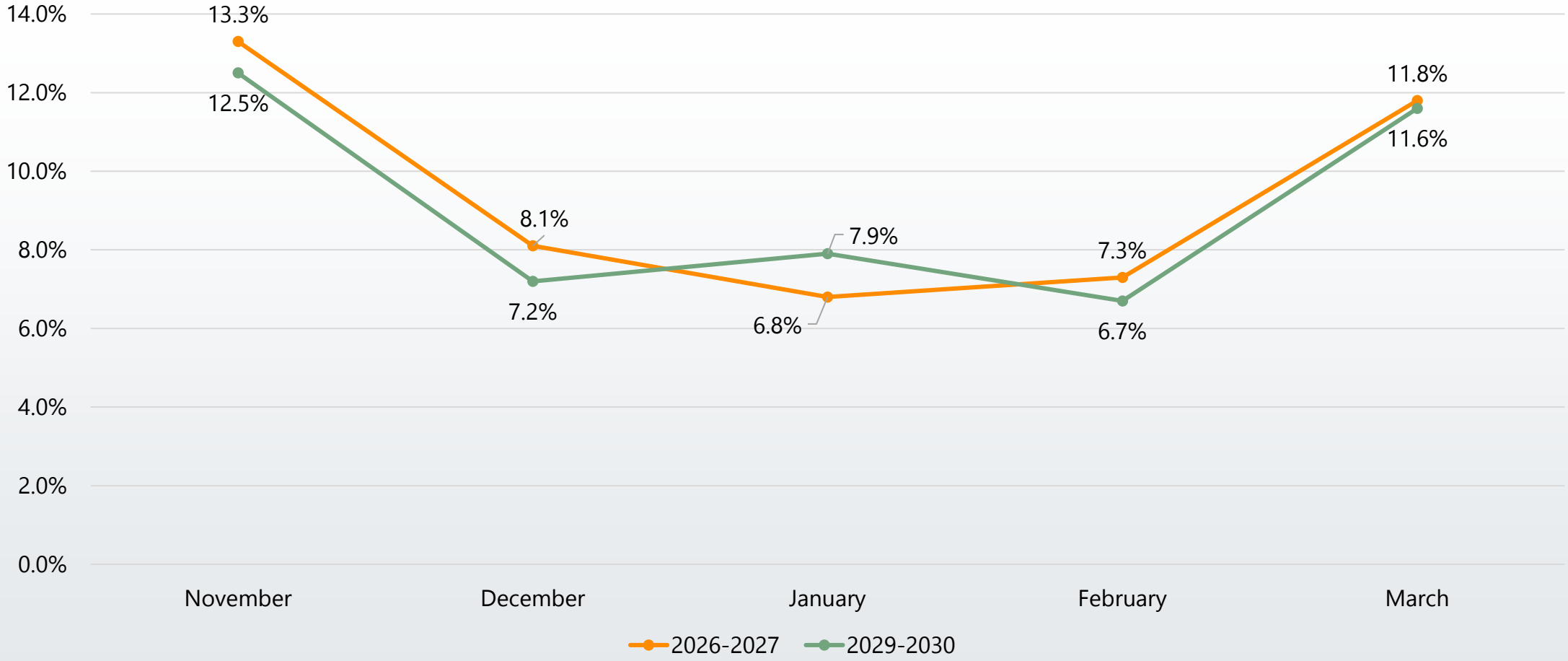
PRM – MIDC WINTER

2026-2027 AND 2029-2030

2026-2027 data labels are above the lines and 2029-2030 data labels are below

PRM – SWEDE WINTER

2026-2027 AND 2029-2030



Thank You

For general inquiries, email wrap@westernpowerpool.org

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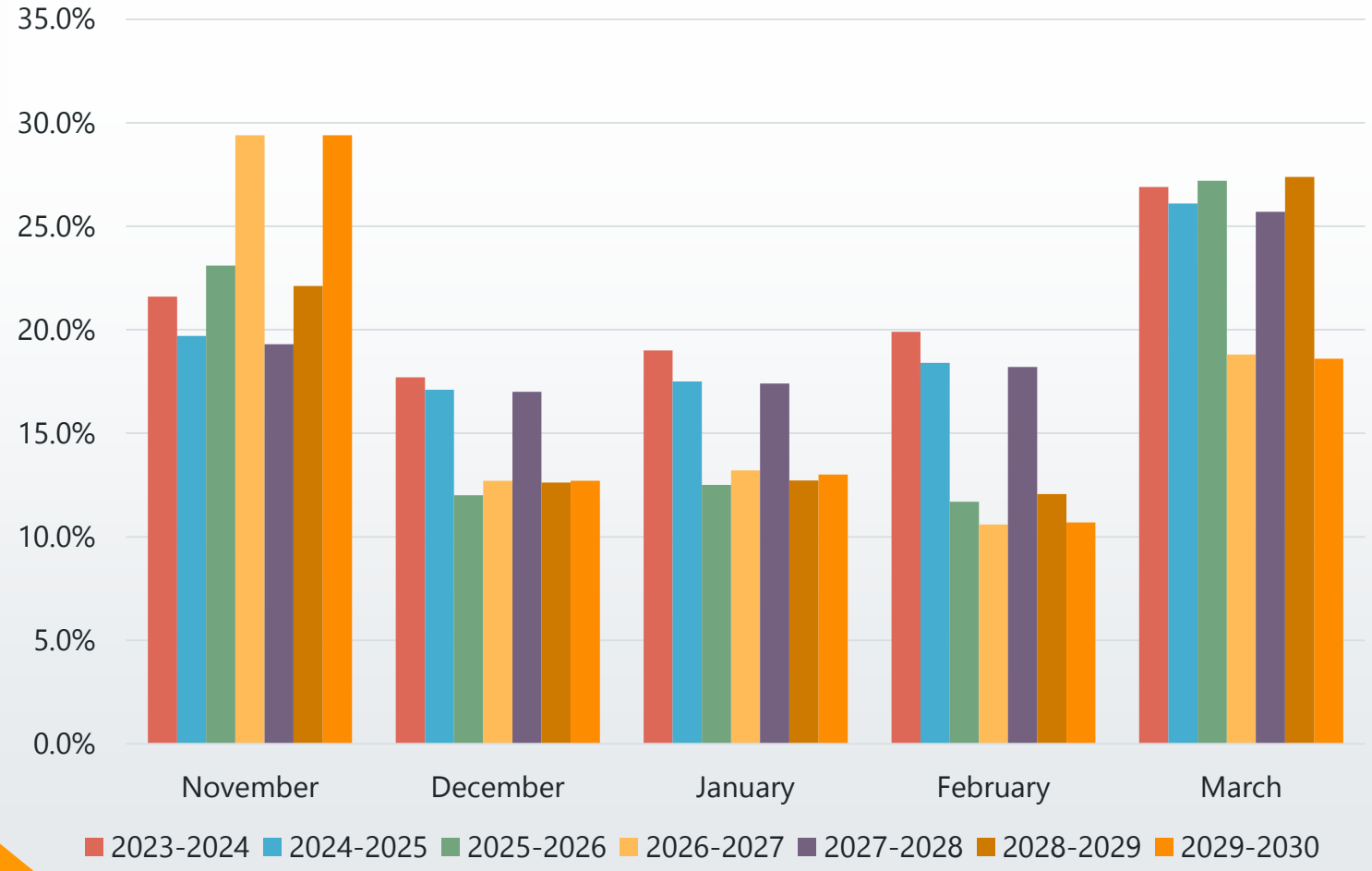
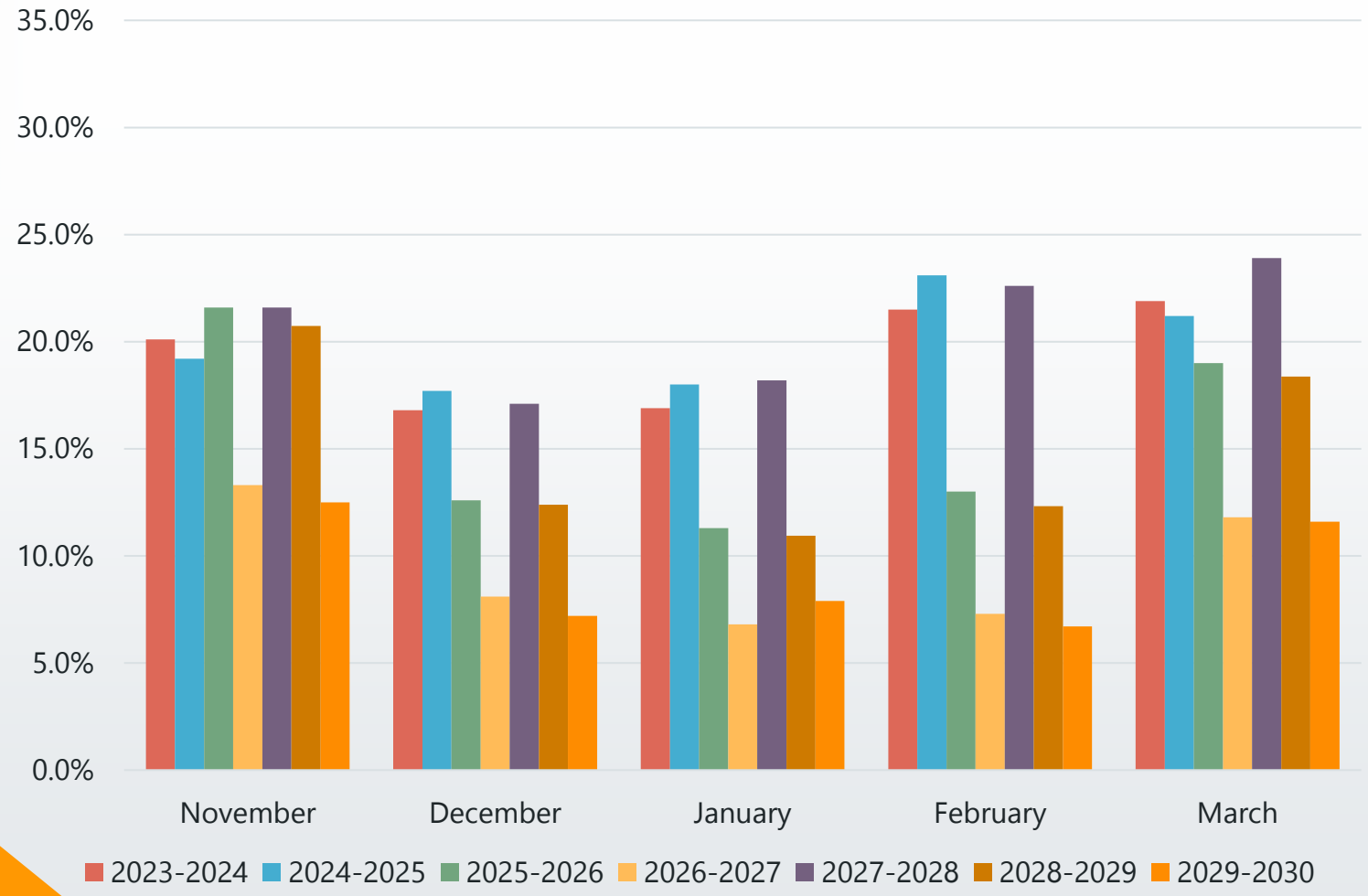
PRMs from Previous Winter Seasons

PRMs – MidC



- 2025-2026, 2026-2028, 2028-2029, and 2029-2030 studies were performed the updated methodology discussed on previous slides
- 2027-2028, 2028-2029, and 2029-2030 are advisory only

PRMs – SWEDE



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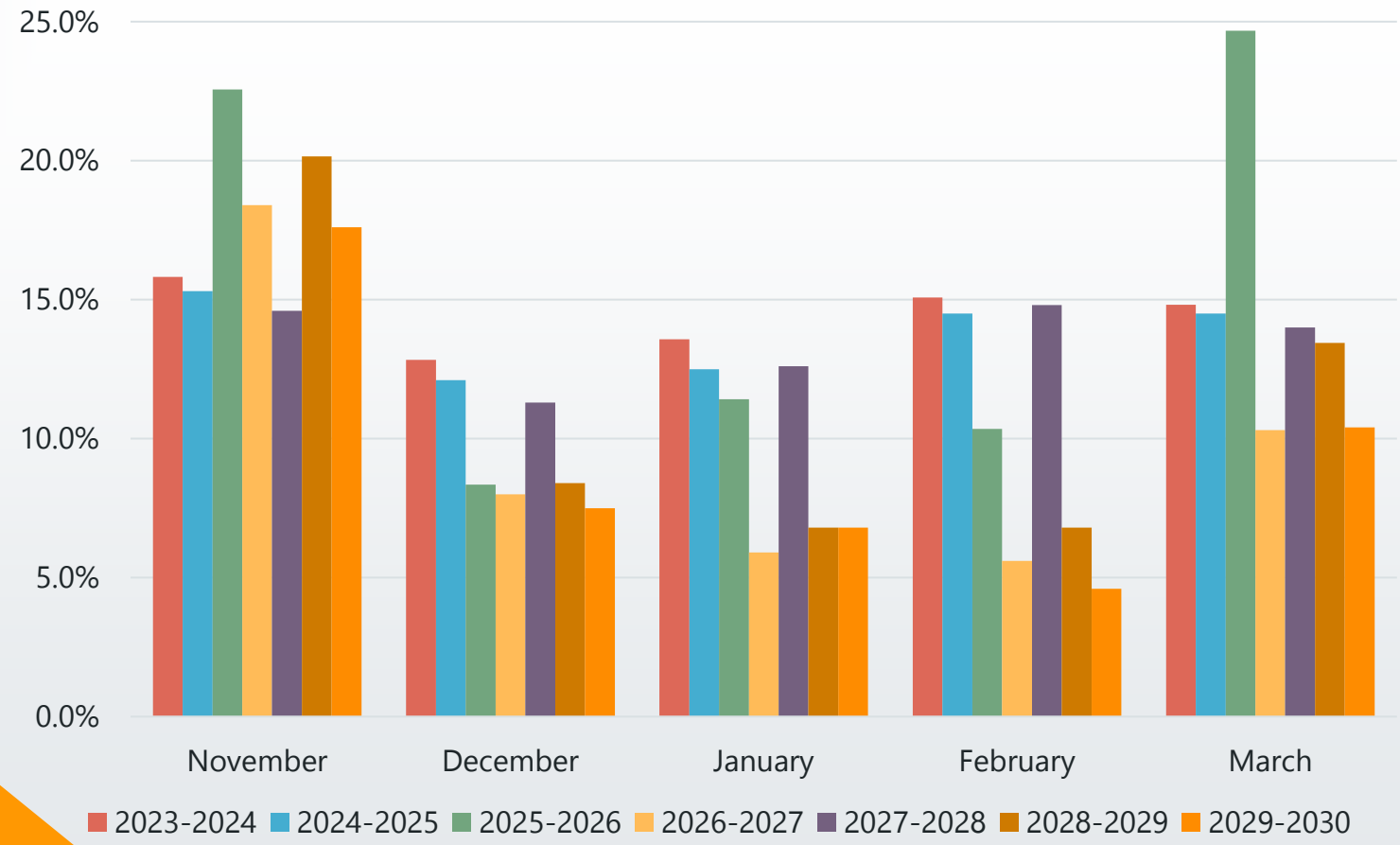
PRMs – WRAP Region



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