WESTERN ENERGY IMBALANCE MARKET

EIM benefits and implementations update

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Board of Governors General Session December 17, 2021



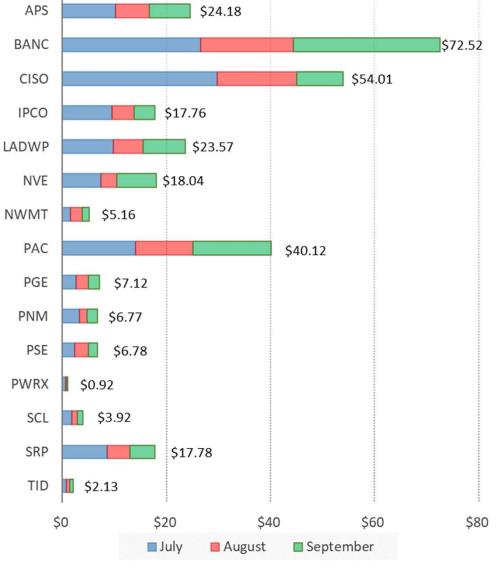
\$301.18 million gross economic benefits in Q3 2021

Record level of gross economic benefits driven by:

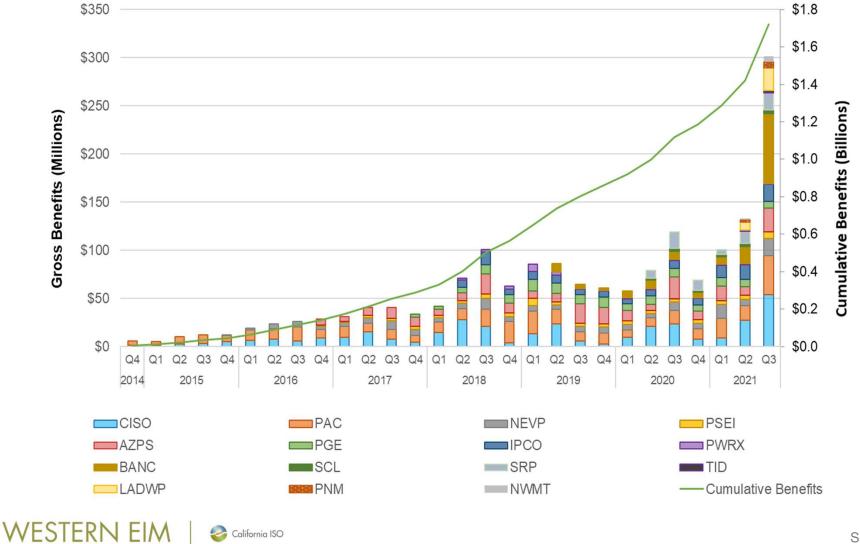
- Participation of five additional EIM entities
- Economic transfers among areas
- Displacement of highly-valued supply

California ISO

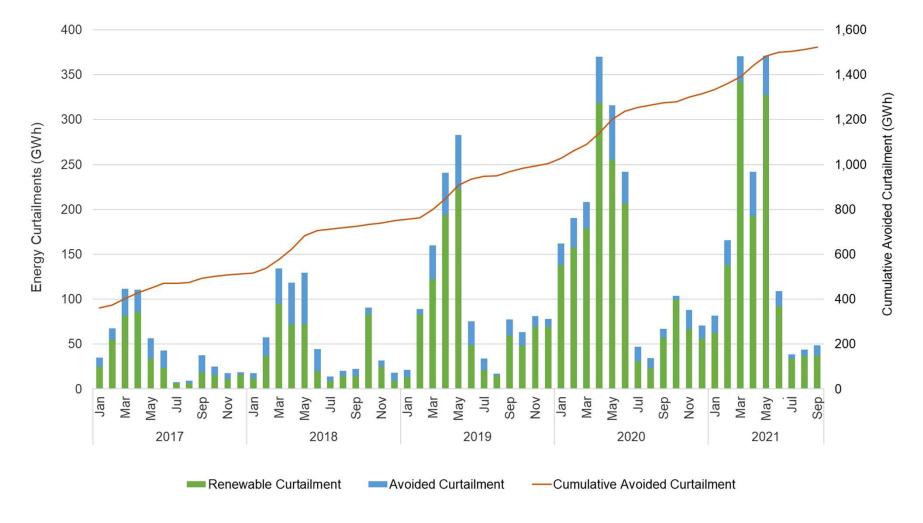
WESTERN EIM



Cumulative benefits through Q3 2021 reached \$1.72 Billion



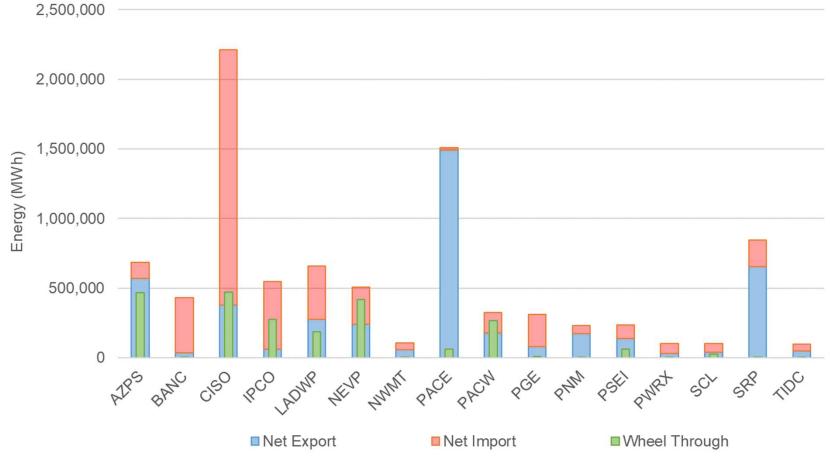
Energy imbalance market helps reduce curtailments



Avoided curtailments since 2015 represent a reduction of 655 equivalent Tons CO₂



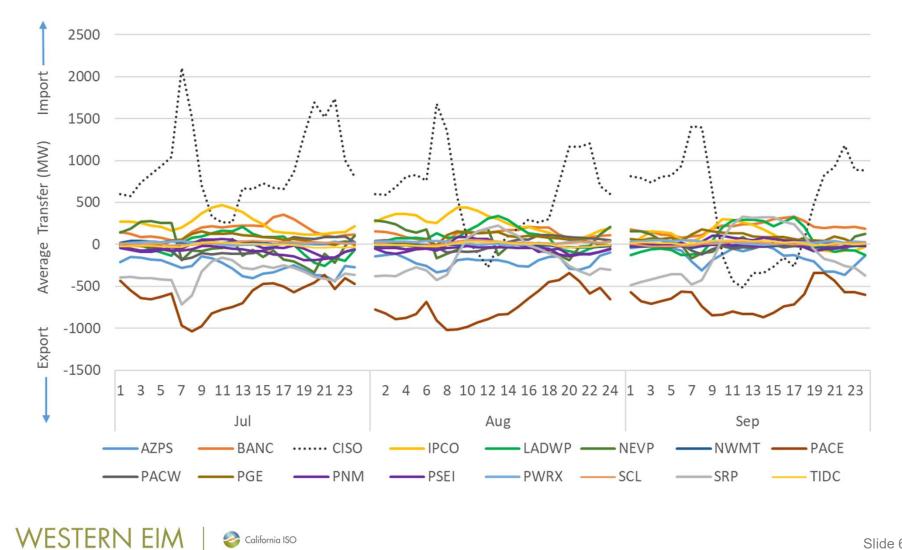
Volumes of wheel-through EIM transfers in Q3 2021 were generally lower than EIM imports/export volumes



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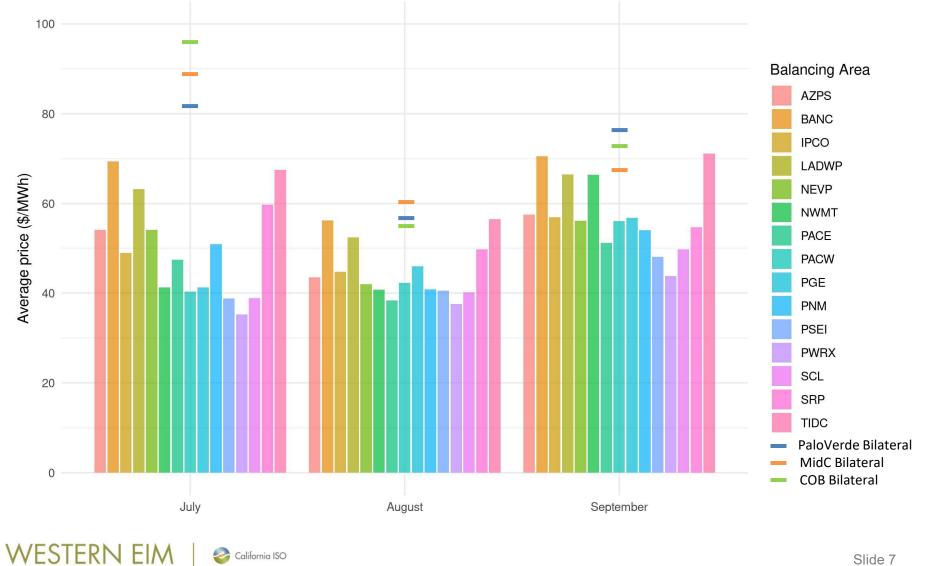
🛃 California ISO

Robust energy transfers in Q3 2021 with changing patterns in September

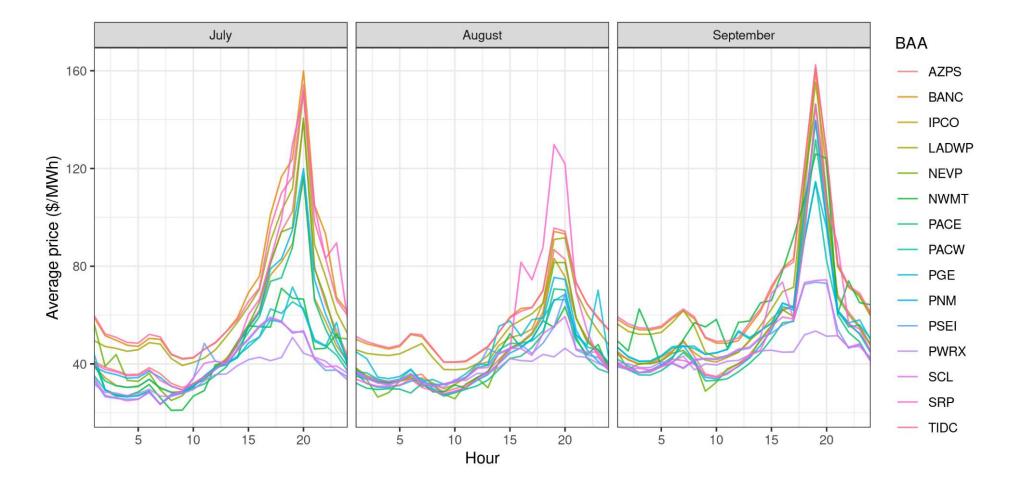


California ISO

Summer months saw higher average prices given tight supply conditions across the West



Hourly average prices trend reflects summer conditions with high prices during peak hours



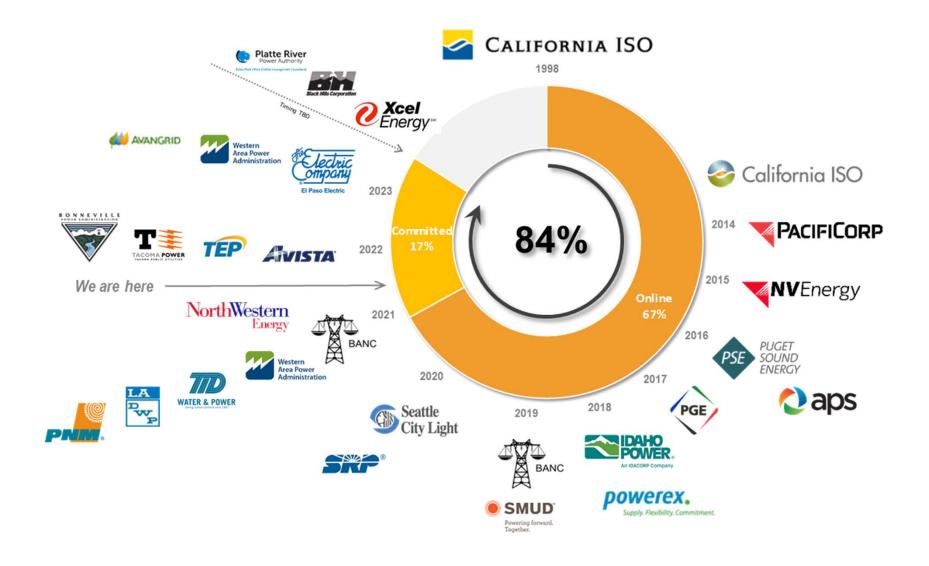
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EIM Implementation Status

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EIM On-boarding update

- 2022 EIMs On-boarding status
 - Parallel operation started on 12/1/2021, targeting production on 3/2/2022
 - \circ Avista Utilities
 - Bonneville Power Administration
 - Tacoma Power
 - Market sim started, targeting parallel operation on 2/1/2022, production on 4/1/2022
 - Tucson Electric Power
- 2023 EIMs On-boarding status production 4/5/2023
 - SC applications, initial data submissions, physical meter assessment forms, train-the-trainer workshop registration
 - Avangrid
 - El Paso Electric
 - Western Area Power Administration Desert South West

