

Schedule EF

Overview of Planned Modifications

Ray Johnson
Deputy General Manager, Power Management

Market, reliability, and regulatory paradigms have changed radically since we offered a pilot rate tariff for green hydrogen producers (Schedule EF). Today, providing service under this tariff will result in large cost shifts to existing customers.

Tacoma Power will modify design of Schedule EF to eliminate cost shift

Contents

1

What is Green Hydrogen?

2

Schedule EF

3

Key Changes

4

Modifications

5

Appendix

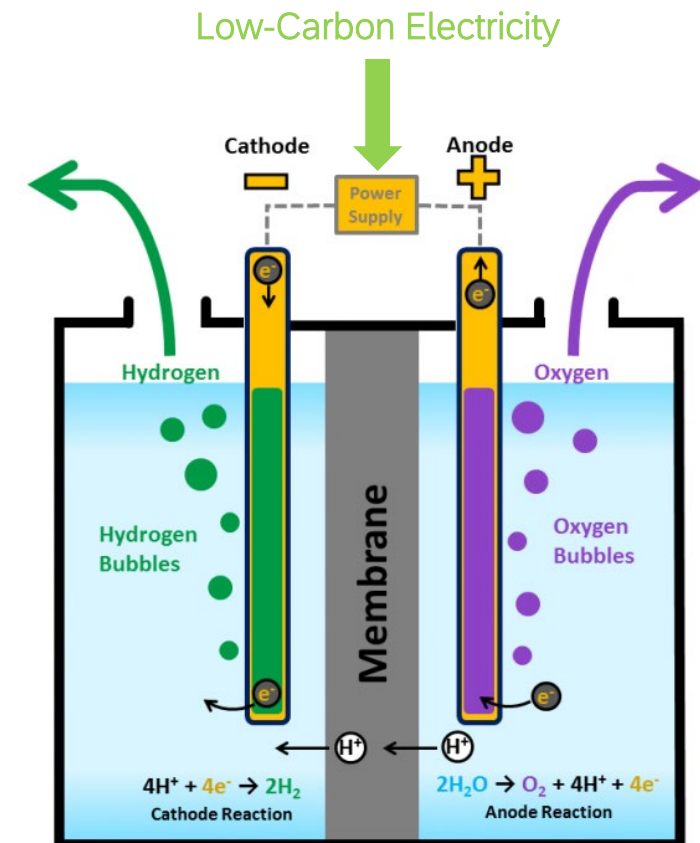
What is Green Hydrogen?

Part 1

What is Green Hydrogen?

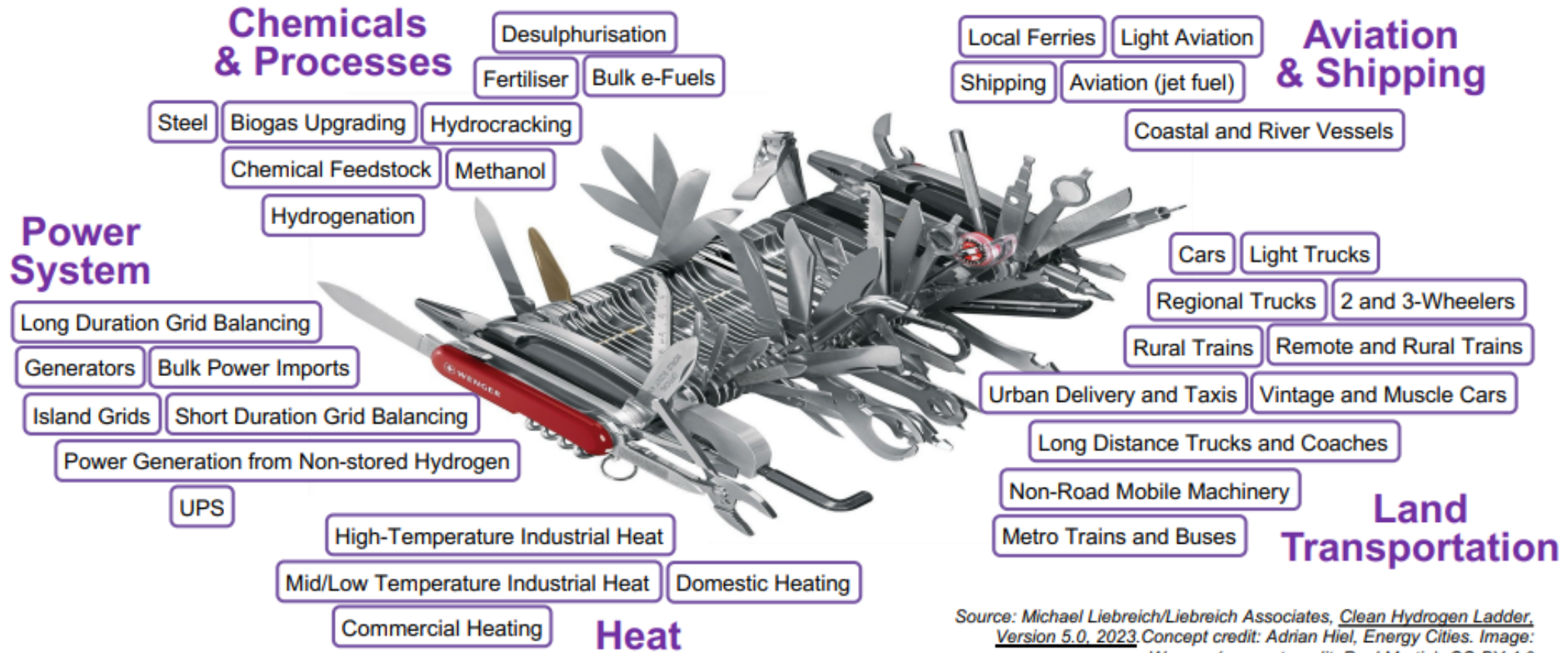
What is green hydrogen?

- Hydrogen can be produced using electrical energy to split water molecules in a process known as electrolysis, creating only oxygen as a by-product
- If the electrical energy is made from renewable sources – for example wind and solar energy – then the process is close to zero emissions and called renewable hydrogen. It is often also referred to as ‘green hydrogen’
- Many governments and businesses believe that a clean hydrogen economy could be the key to the energy transition.



What is Green Hydrogen?

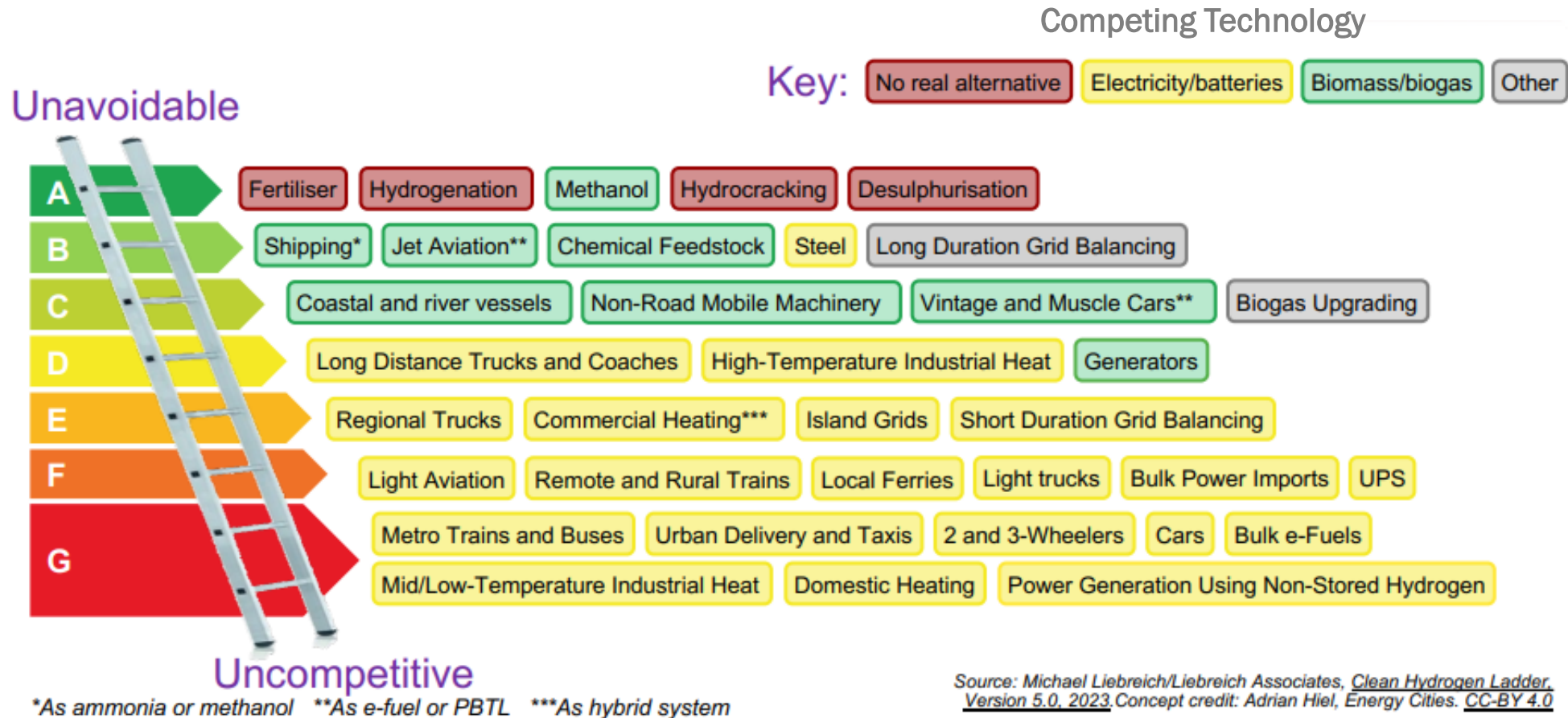
What could it be used for?



Source: Michael Liebreich/Liebreich Associates, Clean Hydrogen Ladder, Version 5.0, 2023. Concept credit: Adrian Hiel, Energy Cities. Image: Wenger (concept credit: Paul Martin). CC-BY 4.0

What is Green Hydrogen?

Some use cases are more likely than others



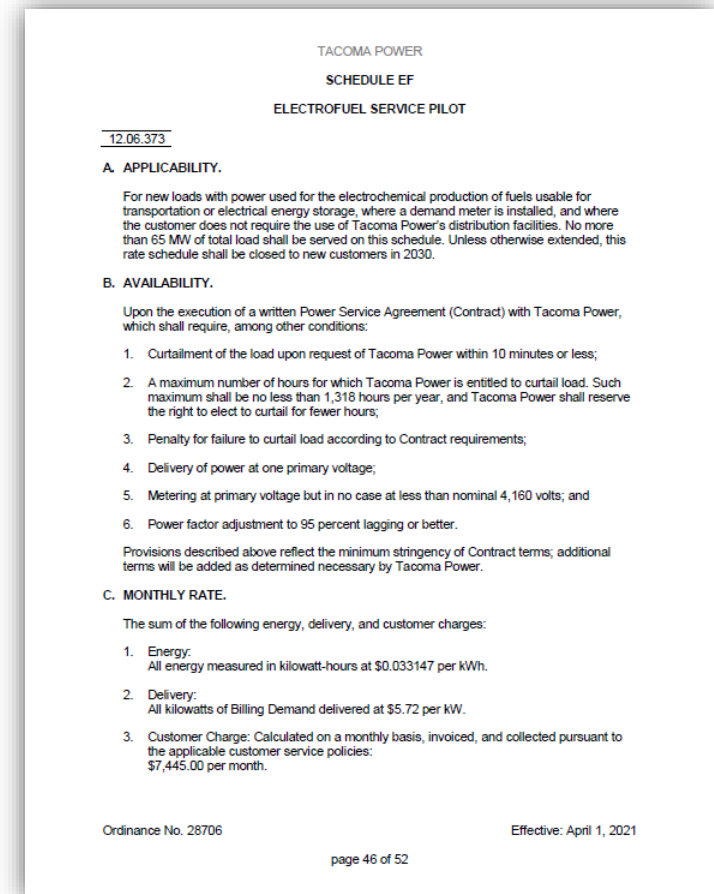
Schedule EF

Part 2

Schedule EF

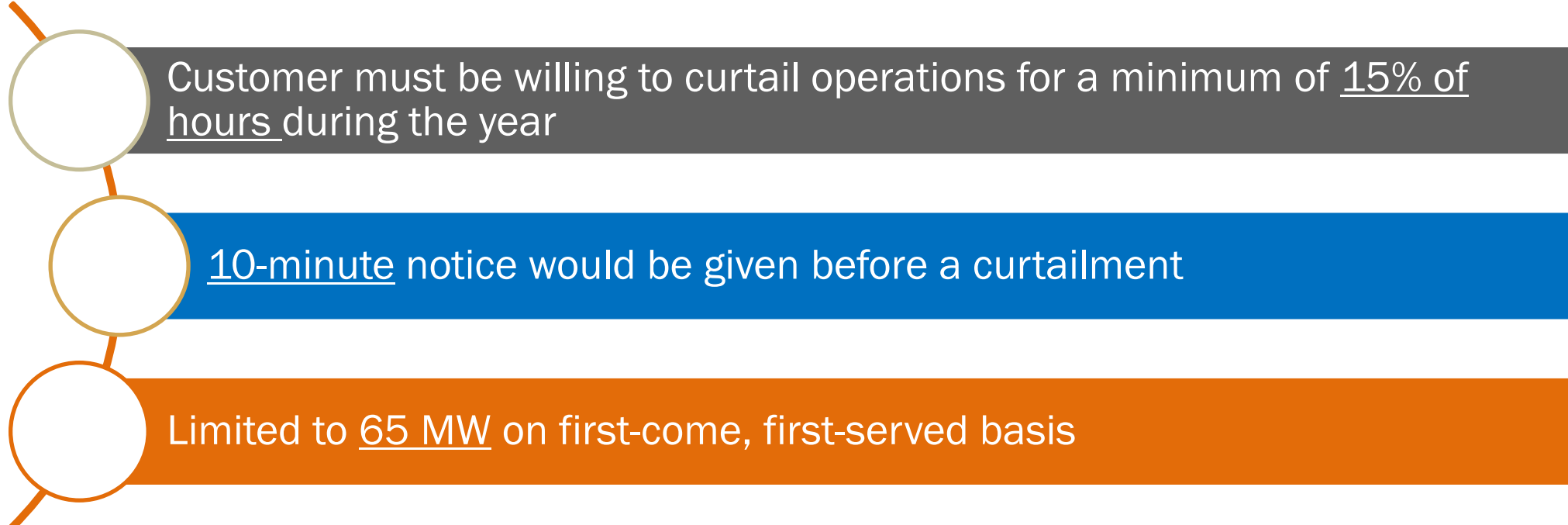
Schedule EF Overview

- In 2021, Tacoma Power established Schedule EF - a pilot rate tariff specifically designed for companies producing green hydrogen
- Schedule EF is a derivative of our Contract Power tariff
- Schedule EF requires the customer to allow their electrical usage to be curtailed periodically in exchange for discounts to the rate



Schedule EF

What was required to qualify?



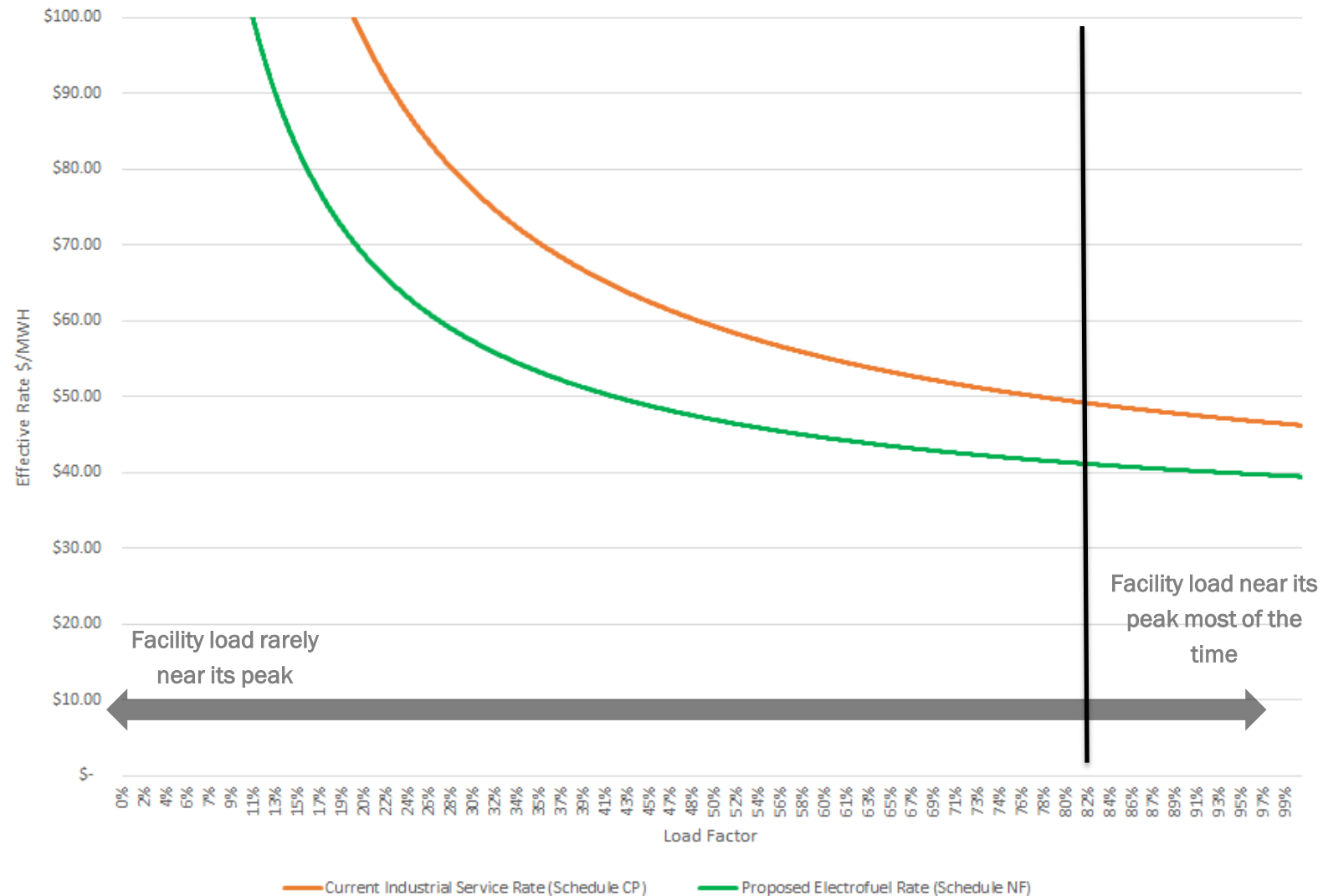
Customer must be willing to curtail operations for a minimum of 15% of hours during the year

10-minute notice would be given before a curtailment

Limited to 65 MW on first-come, first-served basis

Schedule EF

Schedule EF pricing



Overview

- ✓ Schedule EF is Schedule CP less a discount for DR.
- ✓ Schedule CP and Schedule EF are priced on an *embedded* cost basis.

Key Changes

Part 3

Key Changes

Key changes since Schedule EF was established

- High wholesale market prices
- Limited power supply options; high costs

Market



- Uncertainty around the next BPA contract
- Potential loss of the Slice product

BPA
Contract



- Washington Climate Commitment Act (CCA)
- Western Resource Adequacy Program (WRAP)
- Federal Tax Credit

Regulatory



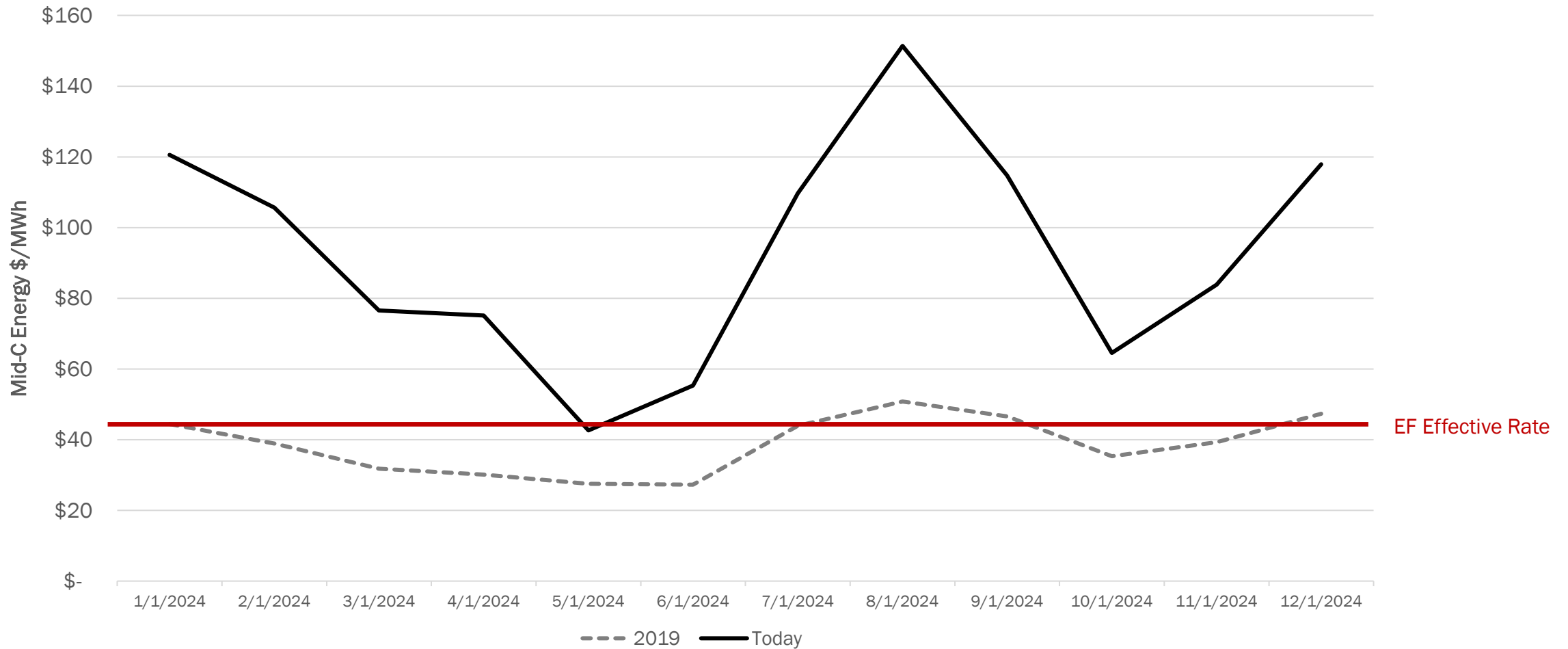
- Changes to Tacoma Power large industrial rate schedules for loads above 10 aMW
- Updates to Electric Rate & Financial Policy prohibiting cost-shifting

Policy &
Rate Design



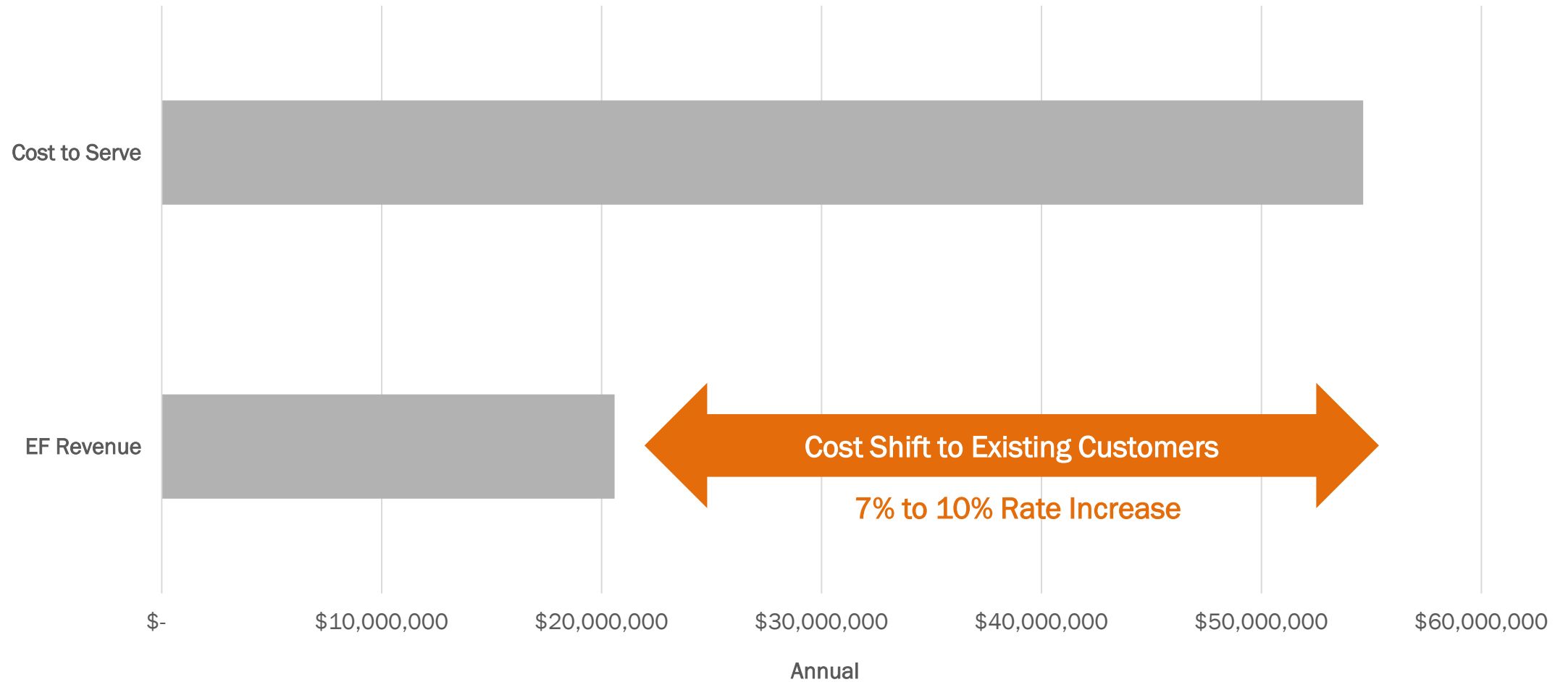
Key Changes

Wholesale prices have increased since Schedule EF designed



Key Changes

EF service results in large cost shift



Modifications

Part 4

Modifications

Planned modifications

- We intend to change the Schedule EF pilot rate from its current design to a design that is similar to our new Very Large Load Service (Schedule VLL).
- Schedule VLL passes through new power supply resource acquisition costs to serve the customer consistent with modern day rate pricing for large loads

Energy Charge	Tacoma Power's incremental cost of acquiring power to serve the customer's load
Demand Charge	Tacoma Power's incremental cost of acquiring power capacity to serve the customer's load
Delivery Charge	Applicable delivery charge on Schedule CP if local distribution service is not required, or Schedule G if local distribution service is required
Fixed Charge	Applicable customer charge on Schedule CP if local distribution service is not required, or Schedule G if local distribution service is required
Demand Response Rider	Tacoma Power will offer to purchase demand response from an EF Customer. Pricing will correspond to the capability of the facility to be interrupted and the value of the curtailment. This will result in a credit on the power bill.

Appendix

Part 5

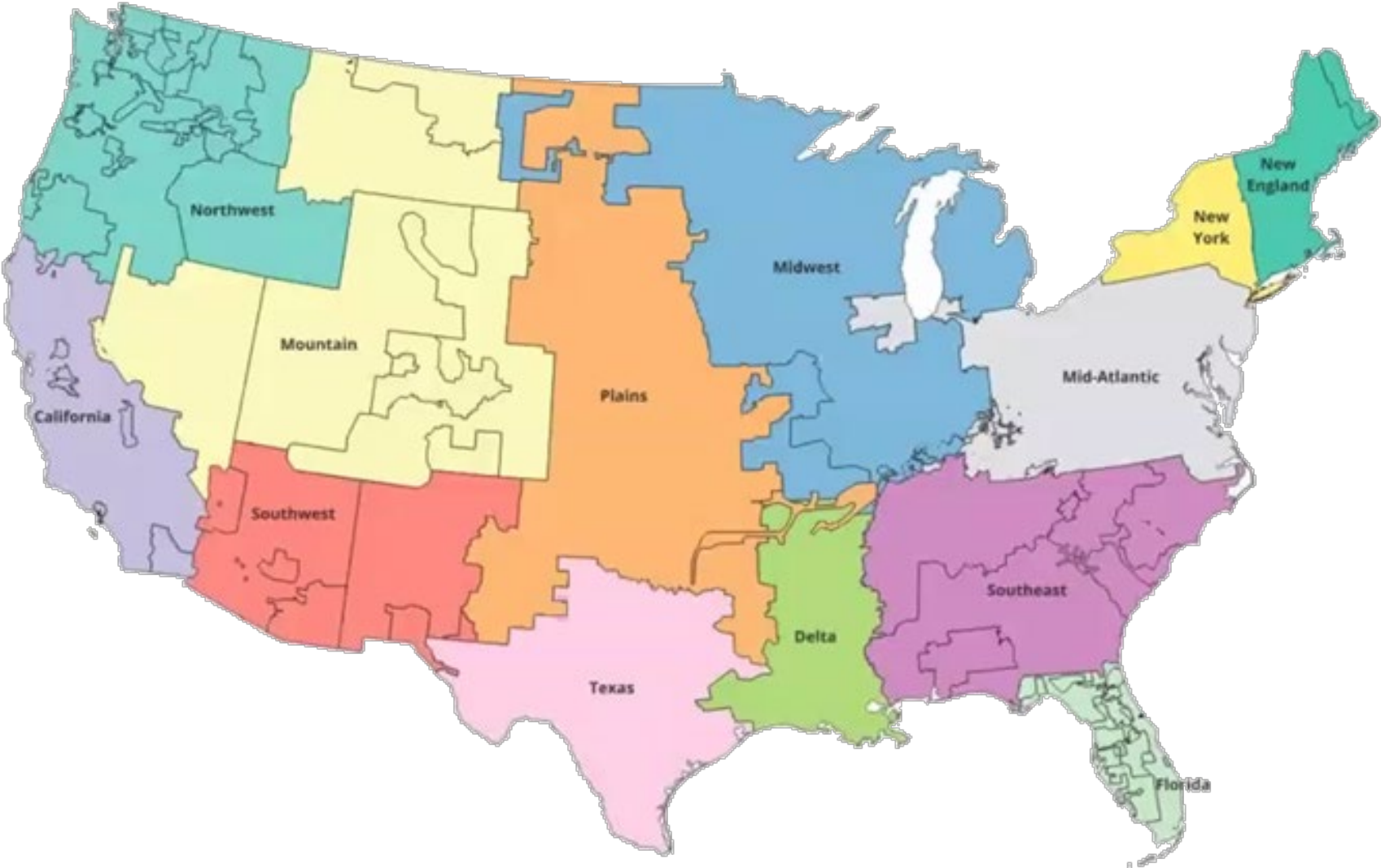
Appendix

45V proposed rulemaking – electricity and EACs

- Treasury proposed rulemaking allows use of energy attribute credits (EACs) for electrolytic hydrogen using grid-connected electricity to meet the lifecycle analysis levels of the credit
- The guidance lays out three primary requirements for producers using EACs – Incrementality, Temporal Matching, and Regionality.
- **Incrementality:** The proposed incrementality rule requires clean hydrogen producers to only purchase EACs from new sources of clean power that begin commercial operations within three years prior to a hydrogen facility being placed into service. The proposed rule also allows for certain newly added capacity or uprates to qualify.
- **Temporal Matching:** The proposed temporal matching rule allows for annual matching of EACs until 2028, after which it will move to an hourly basis.
- **Regionality:** The proposed regionality rule requires EACs to be sourced from within the same region as the hydrogen producer.

Appendix

45V proposed rulemaking – regions



Appendix

Market prices are much higher than the EF rate

