



FPOG Stakeholder Engagement Meeting – 45V and 48E Hydrogen Tax Credit Rules

Flexible Plant Operations and Generation (FPOG)

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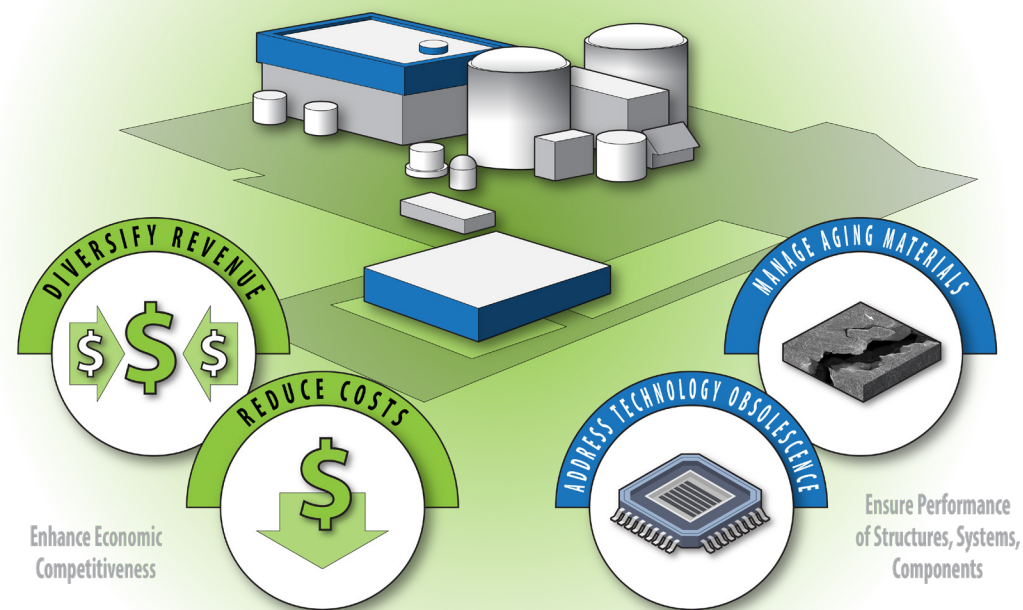


Meeting Purpose and Objectives

Purpose: 45V and 48E Tax Hydrogen Tax Credit - Key Ruling Elements

- Clarify how the Jan 2025 issued 45V and 48E key tax rulings impact alternate energy stream flexibility opportunities for commercial US nuclear plants (NPPs) and industrial partners

Note that the content presented herein is based on best current understanding of 45V and 48E IRA tax rulings. Clarifications are expected based on industry questions. We express gratitude to NEI for their input and peer review.

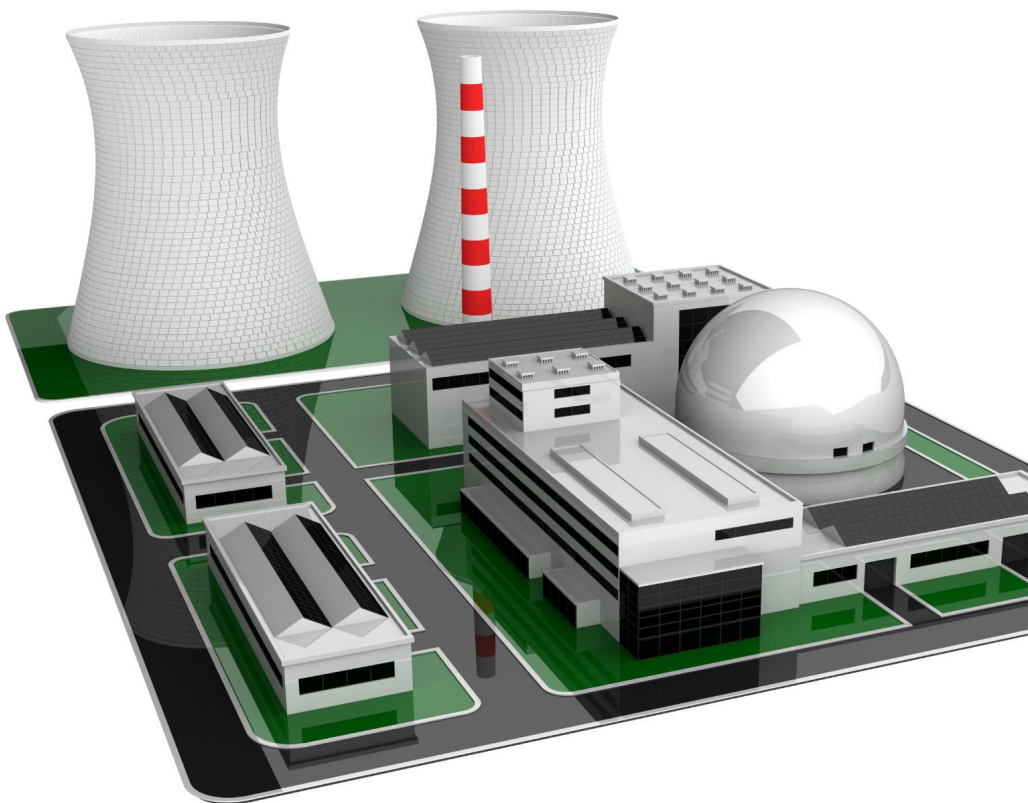


Overview of Key Sections



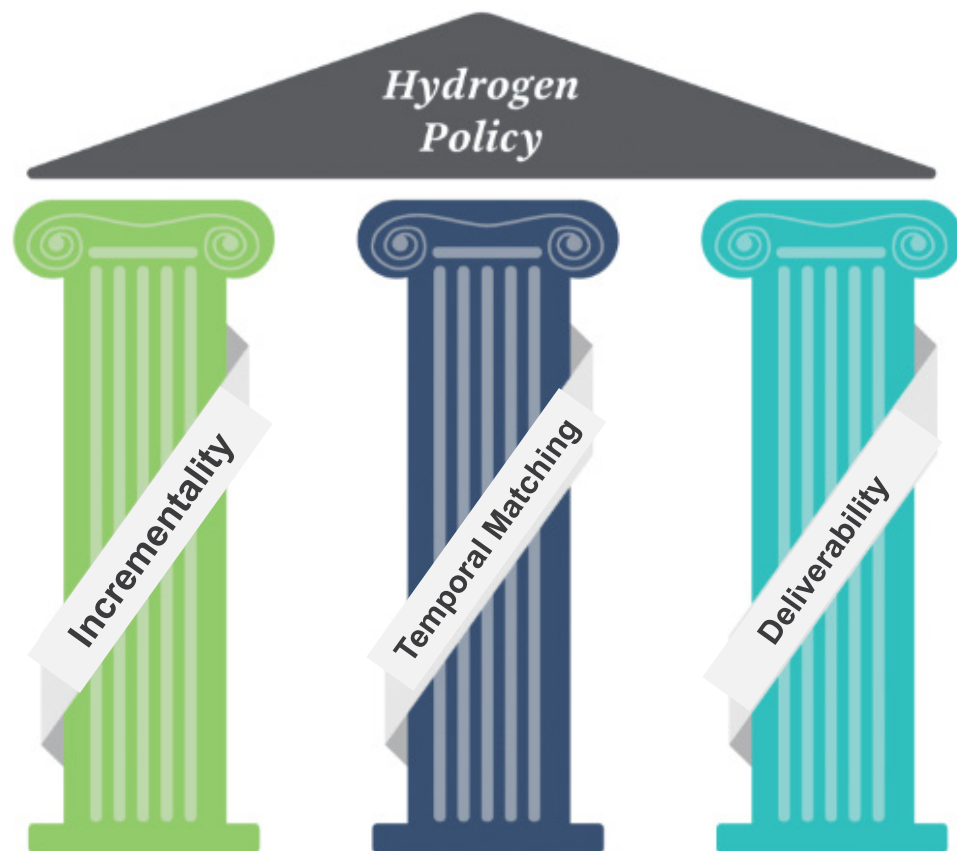
- Confirmation of Generic Elements related to the 45V Tax Credit.
- Clarifications on 45V PTC for *Existing* Nuclear Power Plants.
- Discussion on 45V and 48E ITC for *New* Generation Projects.

Generic 45V Elements Confirmed



- Lifecycle GHG emissions calculated via the 45VH2-GREET model to define clean hydrogen production tax credit values
- Energy Attribution Credits (EAC's) to be acquired and retired by all clean H2 producers seeking credit
- The three pillars of; Incrementality, Temporal Matching, and Deliverability are all required to be met to qualify for credits

Three Pillars Summary

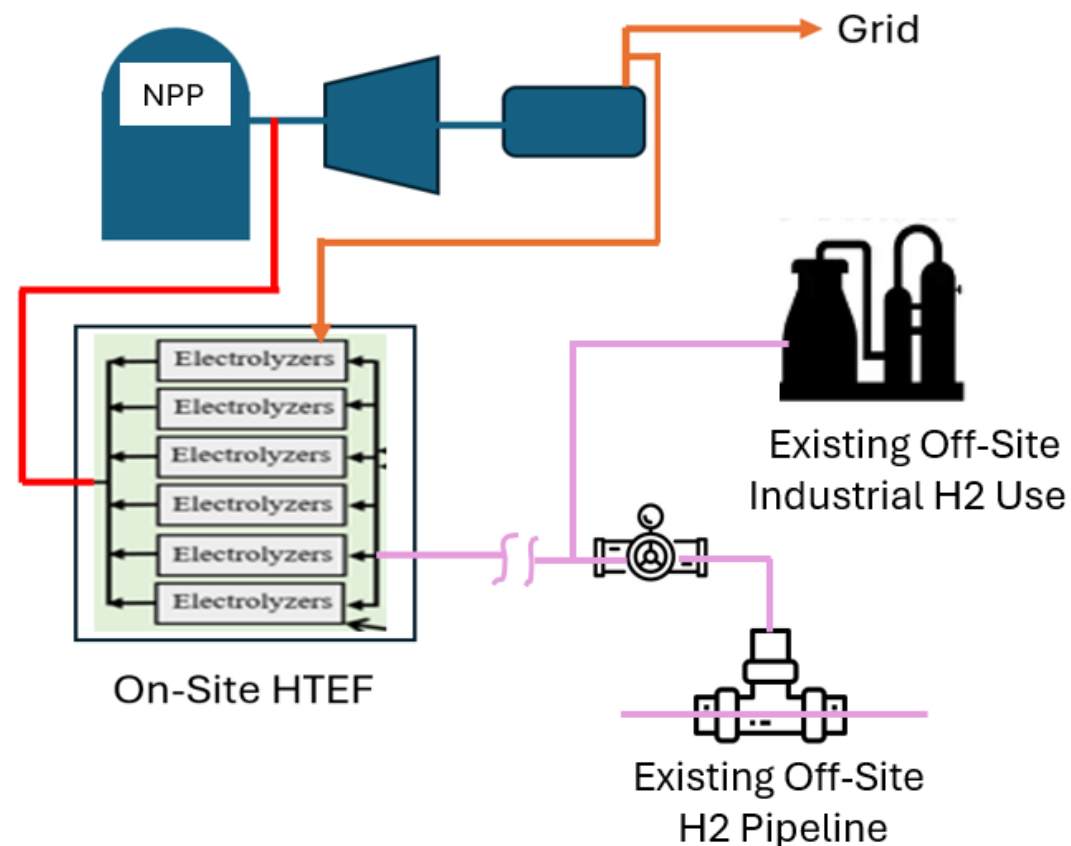


- **Incrementality**
 - Also known as “additionality”
 - Ensures new clean energy is used
 - Prevents diversion of existing clean energy and backfill with fossil-power
- **Temporal Matching**
 - Requires electricity used to produce H₂ is generated in the same hour
- **Deliverability**
 - Ensures clean energy is directly delivered to H₂ production facility or that transmission rights exist from the electric generator to the hydrogen production facility

45V PTC Clarifications - “Existing” NPP Generation

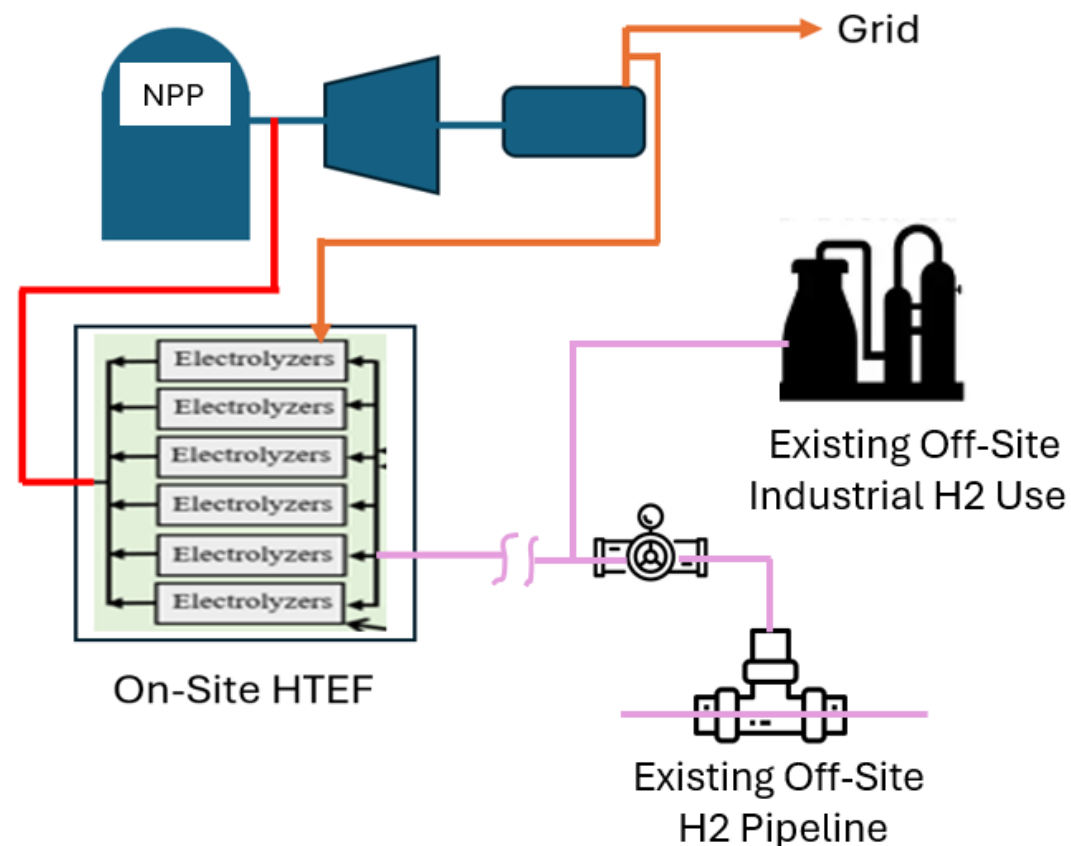
Up to 200 MWh electrical output per reactor qualifies under 45V when NPPs:

- Are in a competitive market: Not receiving more than 50% cost recovery and not publicly owned
- Meet 45U entry requirement – but no sliding scale applies for any average electricity pricing below \$43.75/MWh



45V PTC Clarifications - “Existing” NPP Generation

- Have a physical connection with, or is under a minimum 10-year contract to an offsite hydrogen facility using EACs
- Existing nuclear generating facilities are not subject to the 36 month start of commercial operations prior to the hydrogen facility rule



45V PTC Clarifications – “New” NPP Generation



Upgraded nuclear facility generation for hydrogen production:

- The full amount of new upgraded nuclear power can be used for hydrogen production 45V EAC's (*not limited to 200 MWh*)
- Restarted facilities can similarly be considered new generation and can fully qualify for 45V.

45V “New” NPP Generation Treatment

kgs of CO₂e to produce a kg of QCH	Applicable Percentage	Base PTC Value	Increased PTC Value for PWA
Less than 0.45	100%	\$0.60	\$3.00

45V H₂ Production Tax Credit

- Full value of PTC should be able to be claimed by NPPs based on inherently meeting less than .45 kg's of CO₂ per kg of qualified clean hydrogen (QCH)
- Base PTC value eligible for 5X PWA multiplier if PWA requirements met

48E ITC Clarifications – “New” NPP Generation Treatment

kgs of CO ₂ e to produce a kg of QCH	Energy Percentage	Increased Percentage for PWA
Less than 0.45	6%	30%

48E H2 Investment Tax Credit

- Tax credit for NPP’s designated as an “energy property” to offset the costs of power uprates
- Credit is equal to 6% of qualified investment in a qualified facility (possibly multiplied by 5 to 30% based on meeting PWA requirements)

Other Considerations



- Electrical generation to be used in the same region as H2 facility*
- Stored electricity can be used to meet temporal matching if:
 - Discharged same hour as hydrogen facility use
 - Stored in same region as H2 facility and electrical generator
 - EAC needs to account for storage-related efficiency losses

* Transmission rights exception may apply



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