



Community engagement and benefits in the emerging hydrogen economy



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The Gulf Coast Hydrogen Ecosystem: Opportunities and Solutions
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www.epri.com

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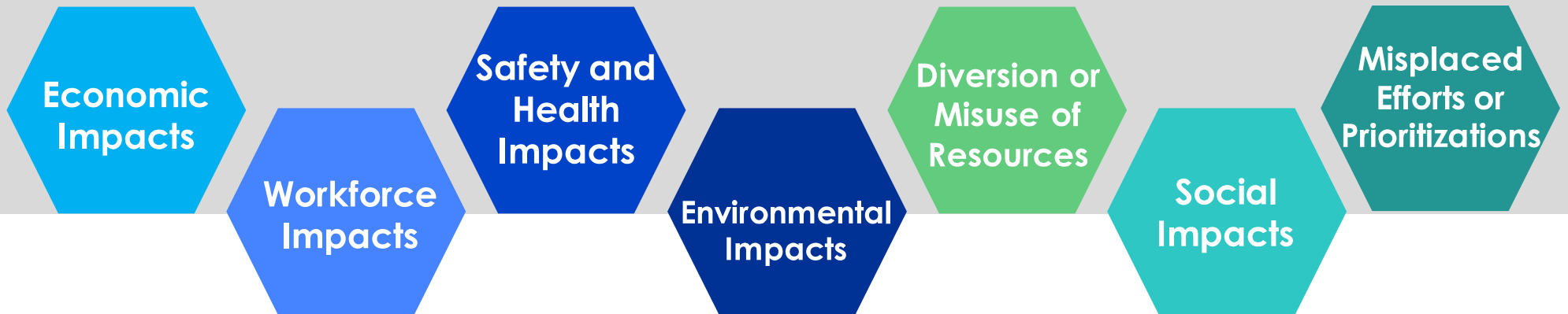
H₂EDGE: <https://hydrogen.epri.com/en/h2edge.html>

LCRI: <https://www.epri.com/research/sectors/lcri>

EPRI: <https://www.epri.com/>

The Why

Community engagement is a key enabler for a low emission future and a just transition. There are many overlapping and differing concerns between and within stakeholder groups. The hydrogen industry can learn leading practices and lessons learned from other industries.



The Why

Source: EPRI Report [3002021708](#)



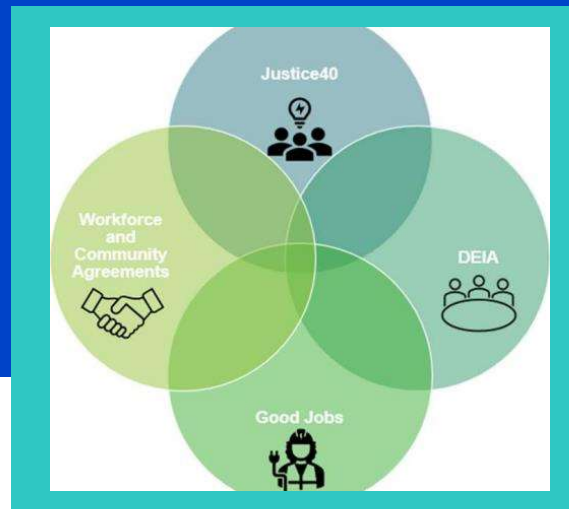
Meeting DOE requirements

- Justice40
- Community Benefits Plans
- Community engagement



Addressing community needs

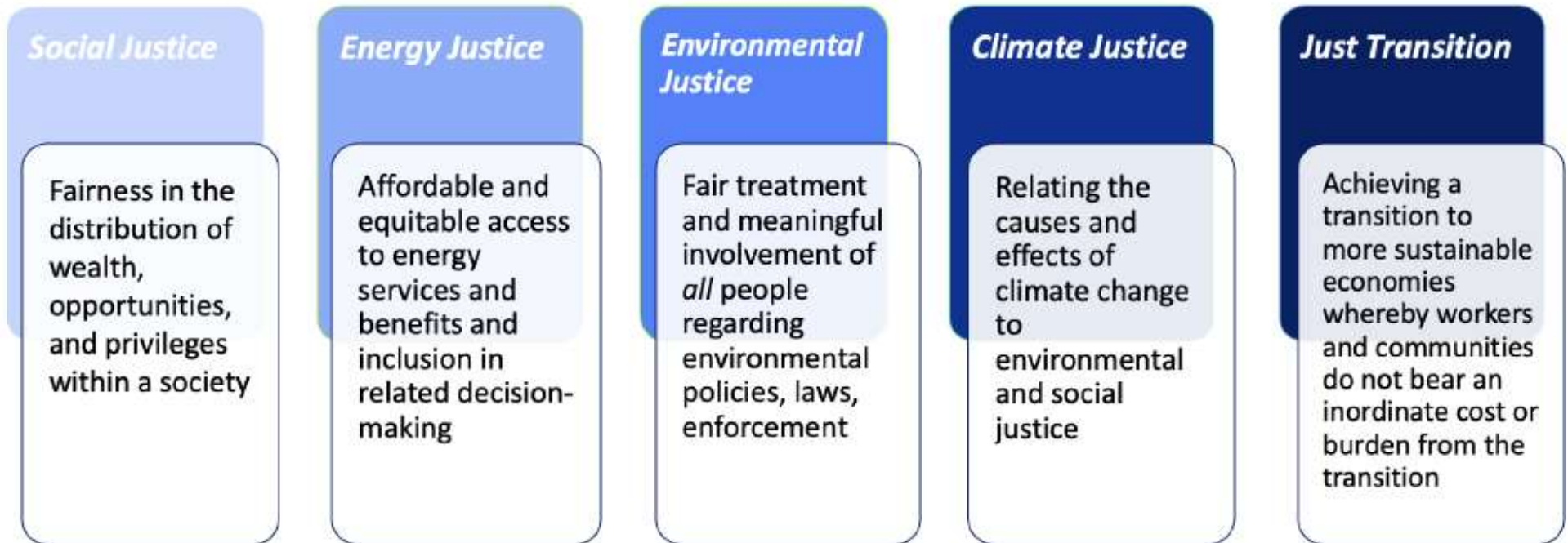
- Engage early and often
- Listen to concerns, priorities, needs, ...
- Provide information and seek input
- Act



Creating effective projects

- Improves project planning
- Contributes to project success and just outcomes

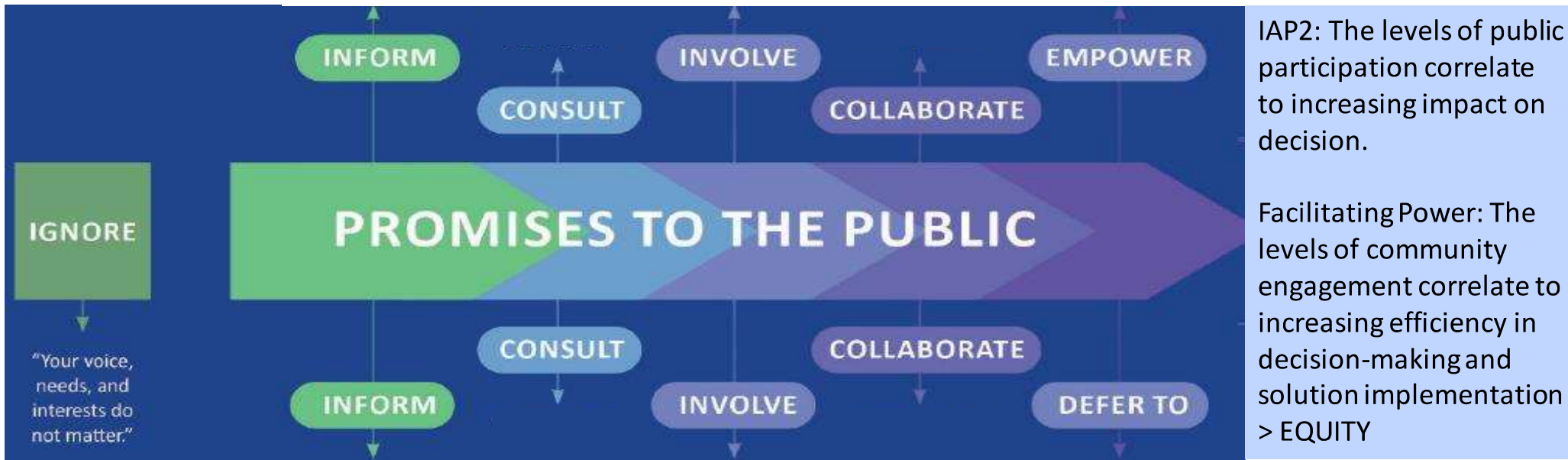
Grounding in terms



Equity: Fairness in the distribution of burdens and benefits

Addressing community needs

Spectrum of community involvement in hydrogen projects



Source: EPRI Report [3002028808](#)

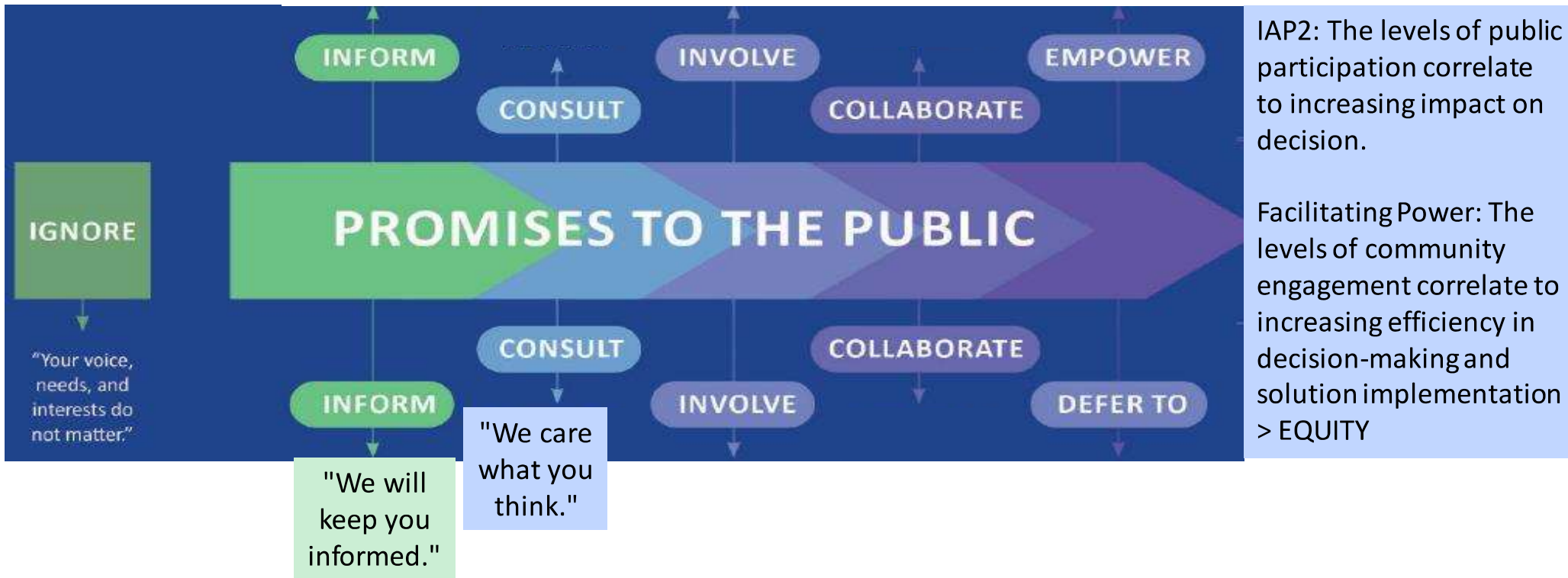
Source: EFI Foundation Hydrogen Market Formation: An Evaluation Framework

Based on IAP2 Spectrum of Public Participation (2018) and

Facilitating Power Spectrum of Community Engagement to Ownership (2020)

Addressing community needs

Spectrum of community involvement in hydrogen projects



Source: EPRI Report [3002028808](#)

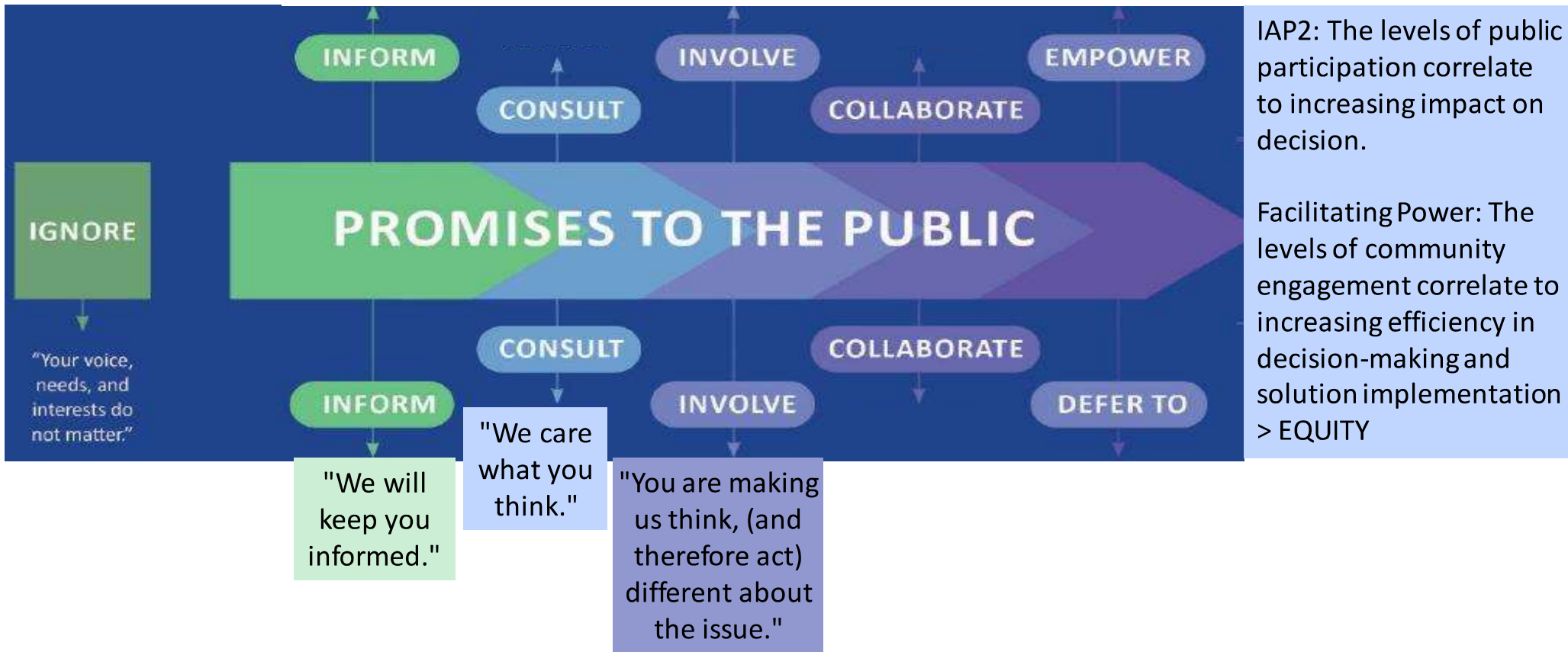
Source: EFI Foundation Hydrogen Market Formation: An Evaluation Framework

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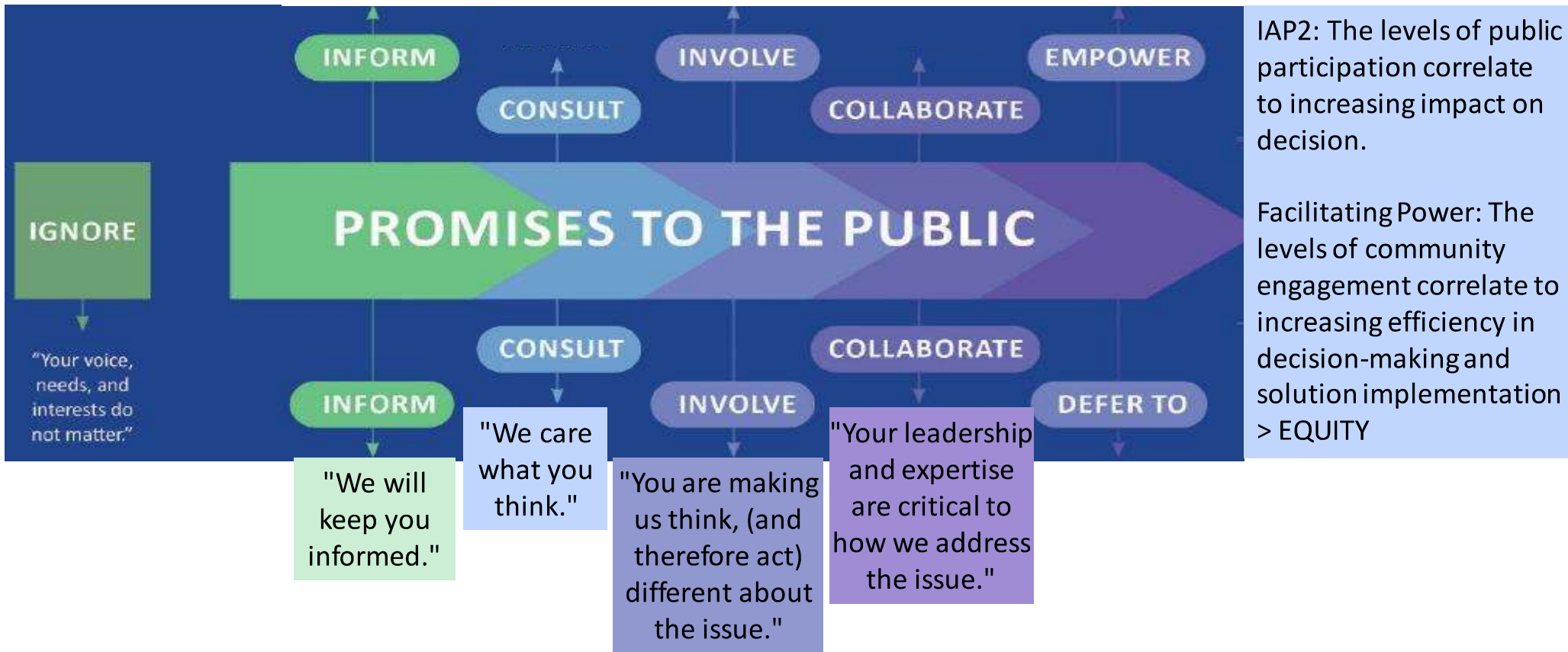
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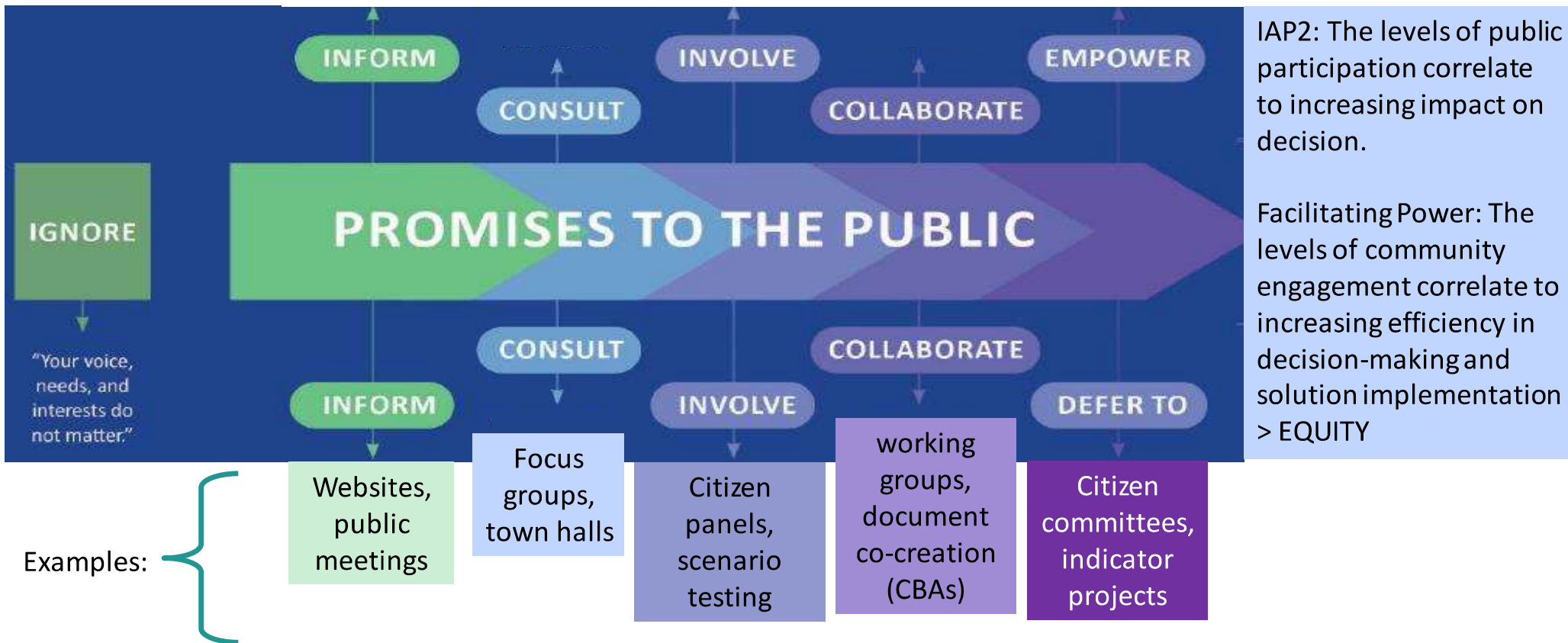
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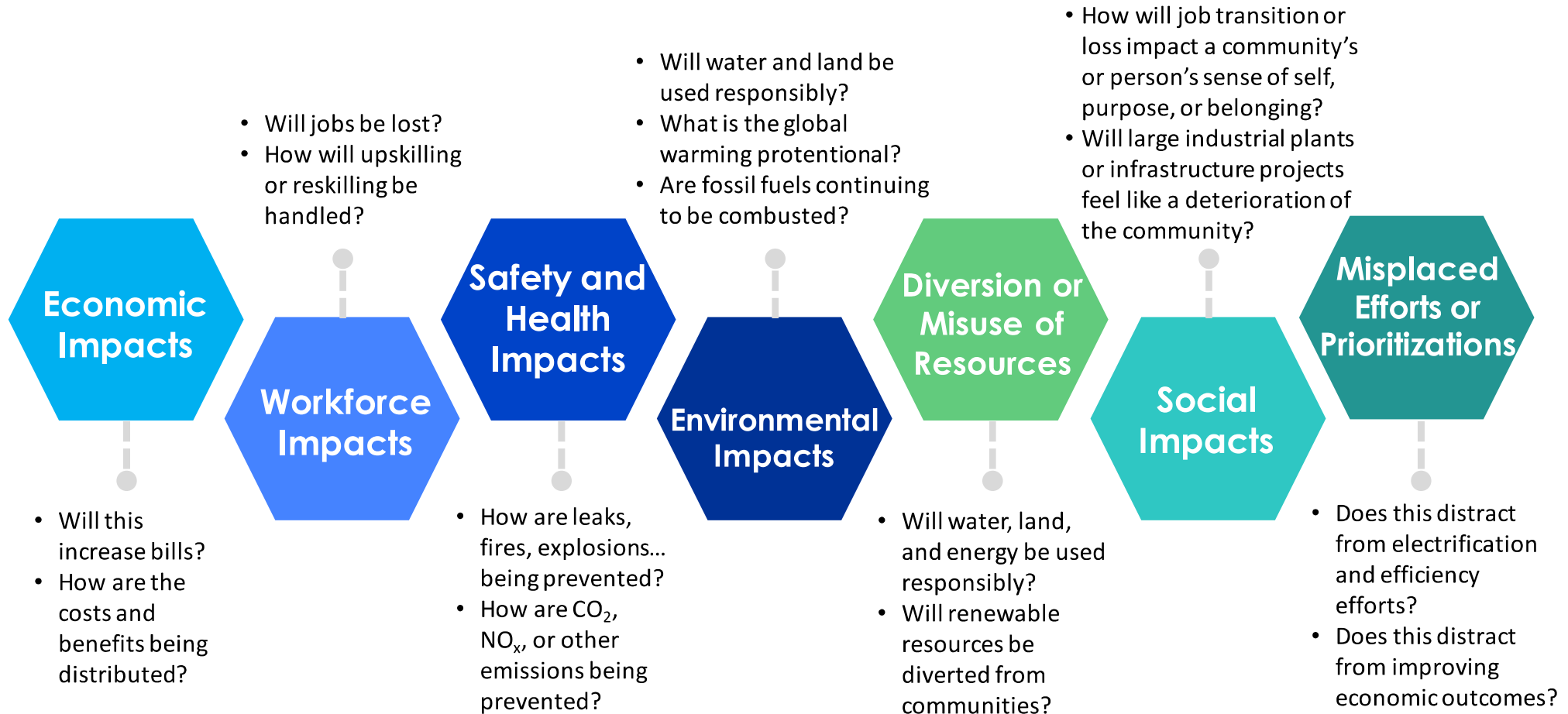
Source: EFI Foundation Hydrogen Market Formation: An Evaluation Framework

Based on IAP2 Spectrum of Public Participation (2018) and

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Addressing community needs

Identifying Potential Concerns



Addressing community needs

Learn leading practices and lessons learned from other industries



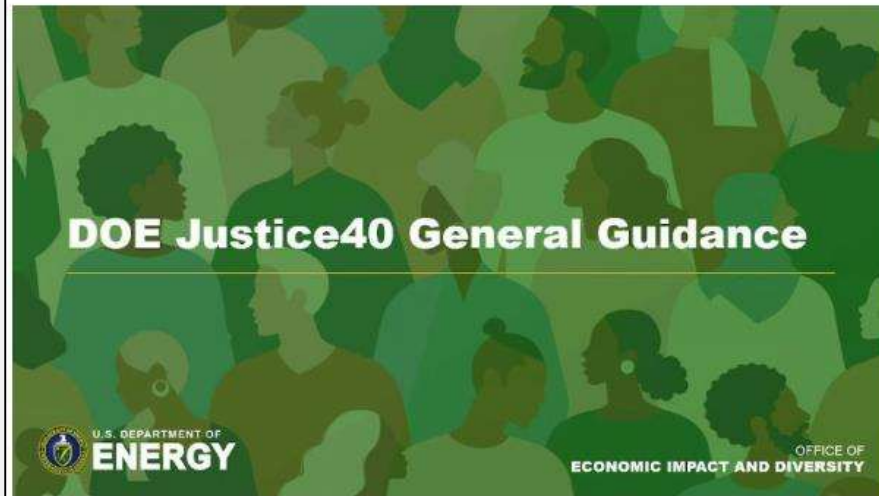
Source: EPRI Report [3002026486](#)

Key issues when evaluating coal plant repowering options with respect to equity and environmental justice

Meeting DOE Requirements

Justice40

DOE Justice40 General Guidance



Source: DOE

<https://www.energy.gov/justice/justice40-initiative>

- 1 What qualifies as a disadvantaged community?
- 2 What does it mean by “certain” Federal investments?
- 3 What counts as a benefit?
- 4 How do we measure and track benefits?

Establishes the goal that 40% of the overall benefits of certain Federal investments flow to disadvantaged communities (DACs)

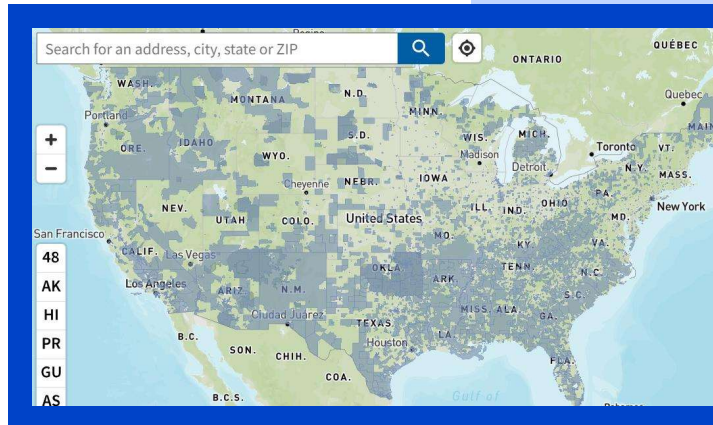
Meeting DOE Requirements

Justice40

What qualifies as a disadvantaged community?

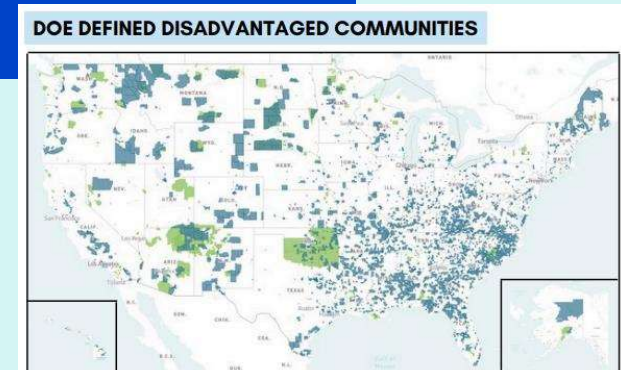
Disadvantaged: based on cumulative burden & includes data for 36 burden indicators collected at census tract level
DAC: census tract must rank in the 80th percentile of the cumulative sum of the indicators & have ≥30% of households classified as low-income

EPS's EJScreen:
<https://www.epa.gov/ejscreen>



White House Council's CEJST:
<https://screeningtool.geoplatform.gov/en/#3/36.64/-97.07>

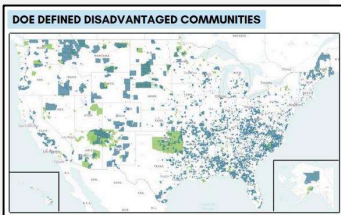
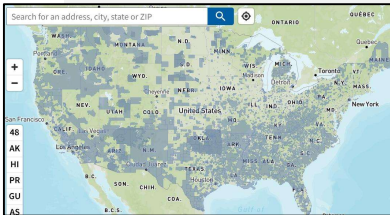
DOE's Energy Justice Mapping Tool:
<https://energyjustice.egs.anl.gov/>



Meeting DOE Requirements

Justice40

What qualifies as a disadvantaged community?



What does it mean by "certain" Federal investments?

List of Community Relevant Justice40 Programs

Justice40 Covered Programs
Funding opportunities for community organizations

Below are Justice40 covered programs funded by the Bipartisan Infrastructure Law where organizations can apply to receive funding.

BATTERY AND CRITICAL MINERAL RECYCLING, BATTERY RECYCLING RESEARCH, DEVELOPMENT, AND DEMONSTRATION GRANTS

- The Office of Manufacturing and Energy Supply Chains Battery Recycling, Research, Development, and Demonstration Grants program will competitively award cost-shared grants to (1) eligible entities for research,

BATTERY MATERIALS PROCESSING GRANTS

- The Office of Manufacturing and Energy Supply Chains Battery Materials Processing Grants program will competitively award cost-shared grants for (1) large-scale battery materials demonstration projects (2) new commercial-scale battery material processing facilities; or (3) to retrofit, retrofit, or expand existing battery material processing facilities. The Program will focus on commercial scale domestic separation of battery

REGIONAL CLEAN HYDROGEN HUBS

- The Office of Clean Energy Demonstrations Regional Clean Hydrogen Hubs program is building at least four regional clean hydrogen hubs across the country to create networks of hydrogen producers, consumers, and local connective infrastructure to accelerate the use of hydrogen.

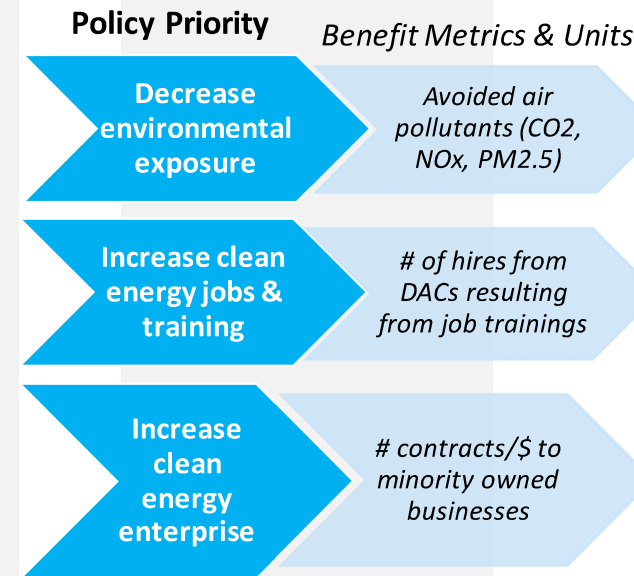
https://www.energy.gov/sites/default/files/2022-08/199749_140%20Document_Working%20Document%20v5.pdf

What counts as a benefit?

- ↓ in energy burden
- ↓ in environmental exposure and burdens
- ↑ clean energy jobs, job pipeline, & job training
- ↑ clean energy enterprise creation and contracting
- ↑ energy democracy
- ↑ access to low-cost capital in DACs
- ↑ parity in clean energy technology access and adoption
- ↑ in energy resiliency

<https://www.energy.gov/justice/justice40-initiative>

How do we measure and track benefits?



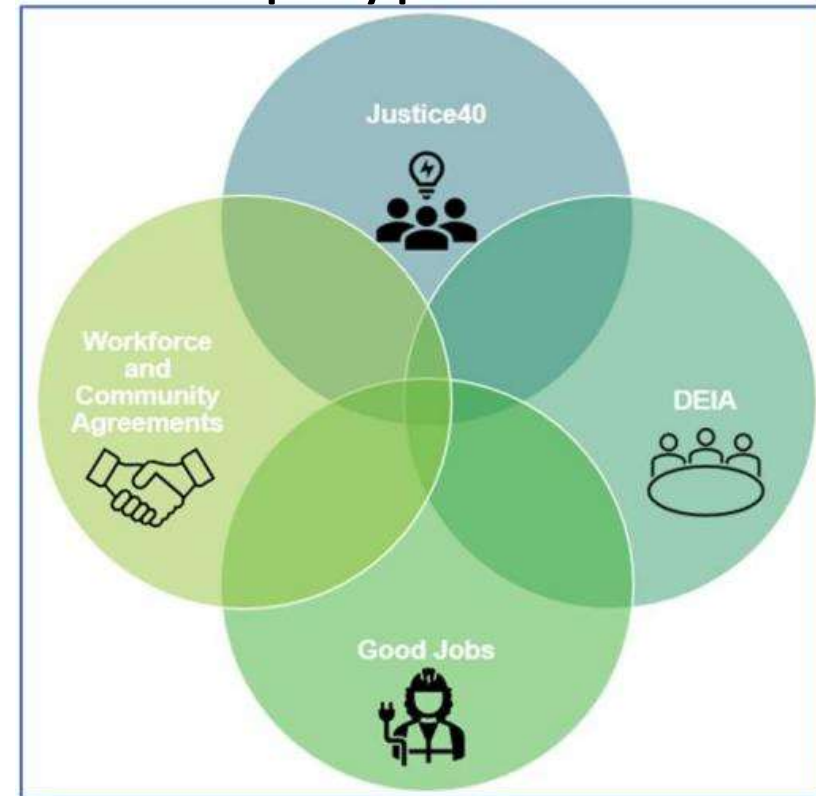
<https://www.energy.gov/sites/default/files/2022-07/Final%20DOE%20Justice40%20General%20Guidance%20072522.pdf>

Meeting DOE Requirements

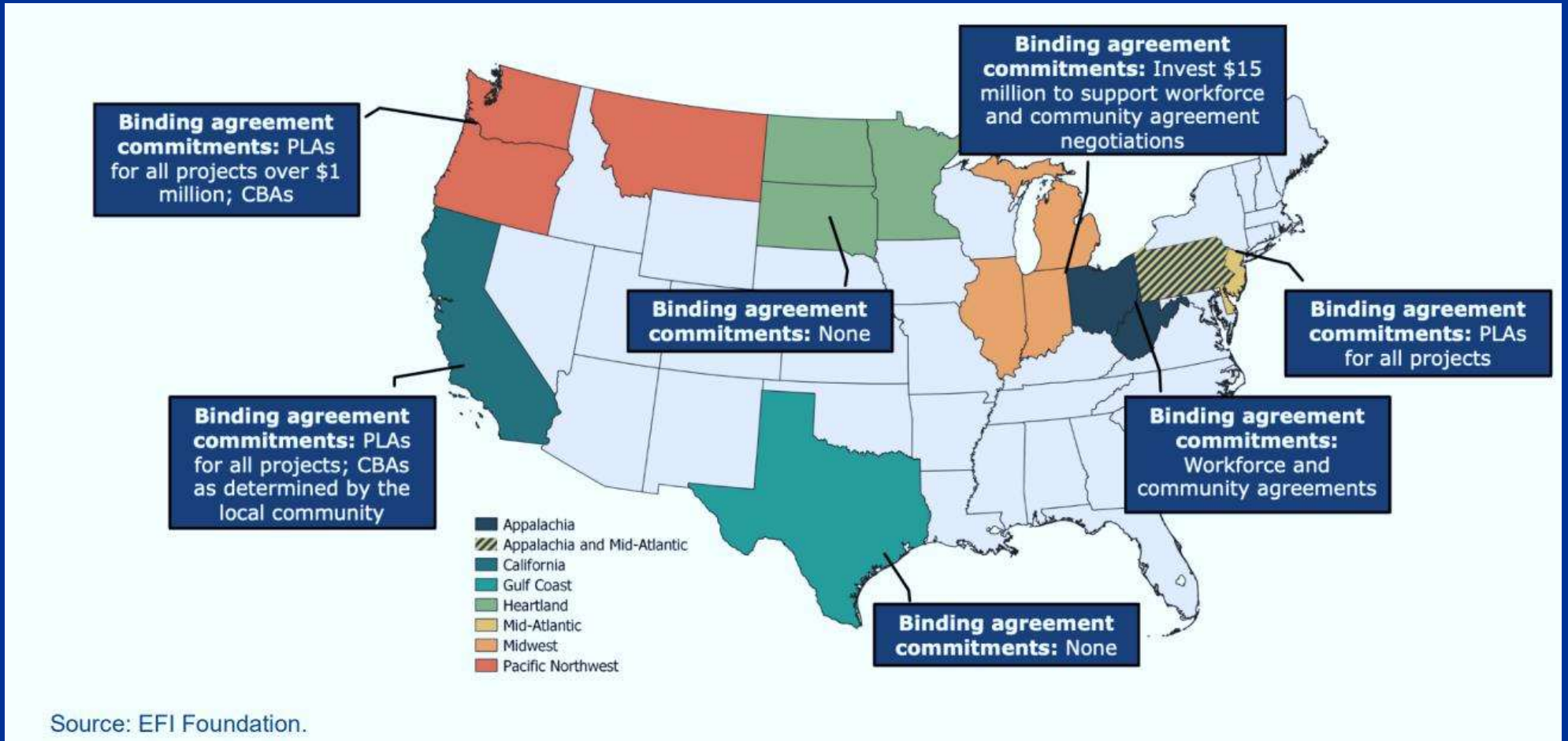
Community Benefits Plans (CBPs)

- The DOE requires CBPs for funding opportunity announcements (FOAs) that are from BIL or IRA
 - Office for Clean Energy Demonstrations release CBP guidance for many FOAs such as H₂Hubs and direct air capture hubs
- CBPs
 - Are purposely flexible
 - Must be specific, actionable, and measurable
 - Will be posted for transparency and accountability
 - Are 20% of the technical merit review of proposals

The four core interdependent policy priorities

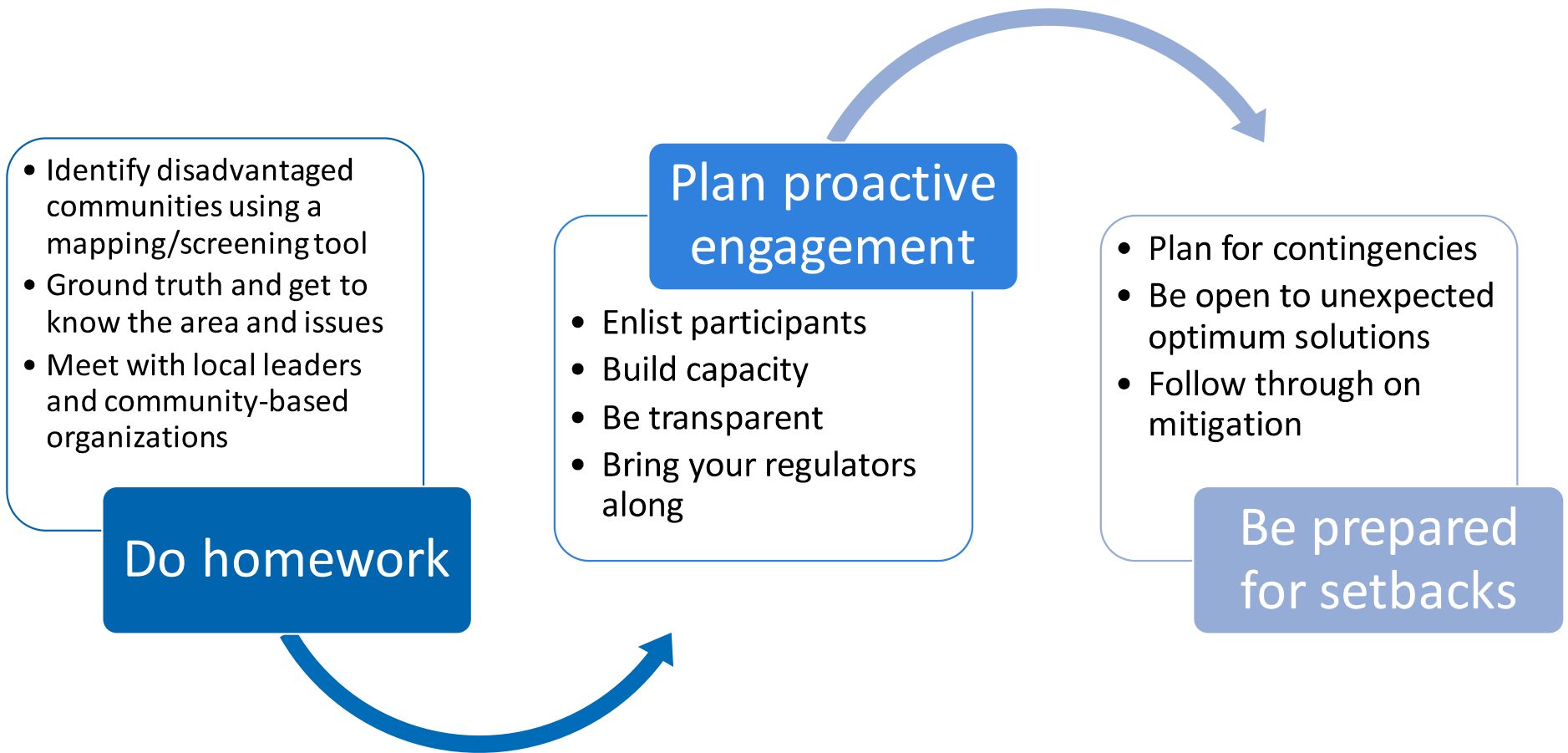


Map of H2Hubs & their respective binding agreement commitments



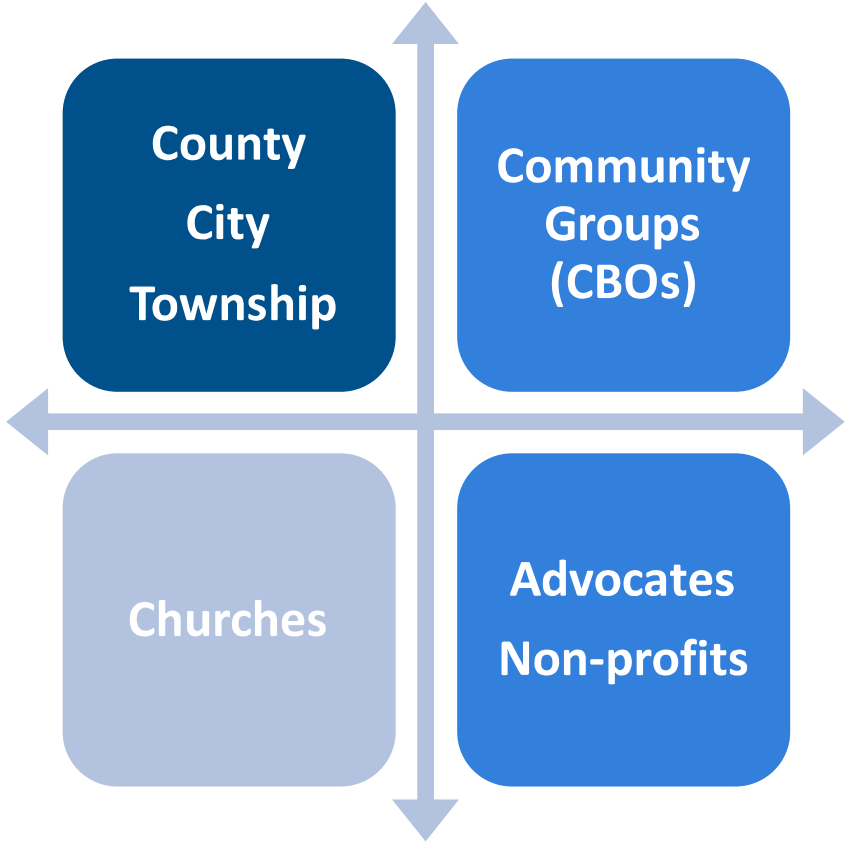
<https://efifoundation.org/foundation-reports/building-stronger-community-engagement-in-hydrogen-hubs/>

Community Engagement



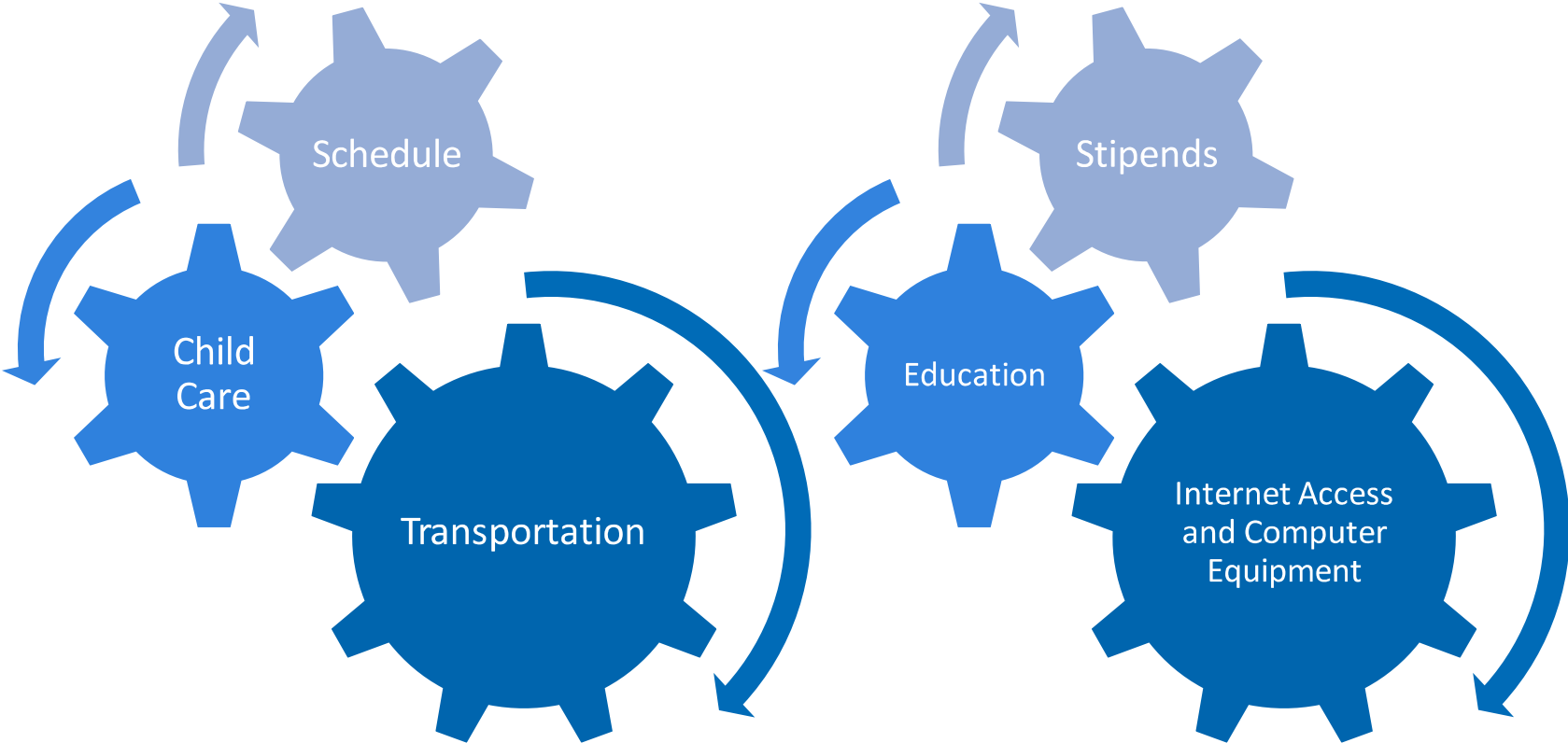
From Informing to Involvement and Empowerment

Engagement Opportunities



Where to "meet people where they are"

Engagement – Capacity Building



Passive Approaches May Not Yield Desired Results

Creating effective projects



Increases efficiency in decision-making



Fosters trust and increases public buy-in



Increases long-term viability



Reduces litigation

By conducting community engagement and aiming to advance social and environmental justice outcomes, industries can create more beneficial, effective, and just projects for a decarbonized global economy and the emerging hydrogen economy.



Improves project planning



Contributes to project success



Advances just outcomes



Advances economic and workforce outcomes

Putting it all together



Source: EPRI
Report
[3002028808](#)

Visualizing outcome-driven engagement

Calls to Action



Be dedicated to helping with the just transition and advancing social, environmental, and energy justice outcomes.



Reach out to experts: Community engagement practitioners, experts in the community, social and behavioral science experts, etc.



Engage early and often (even before projects start!) Create relationships. Learn about concerns, priorities, needs... they may not align with what you think.



Reach out to me! My project involves creating guidelines on low carbon fuel projects, so I would like to connect with those who have contributed to CBPs and those who have actually conducted engagement activities in this space.

Email kyork@epri.com

EPRI 2023 Review

- EDIG Meeting/Webinar Topics
 - Community Engagement
 - CO2 Targets and Equity
 - Mapping and Screening Tools
 - Advanced Buildings
 - EJ Education Webinar
 - Customer Behavior
 - Sustainable Energy and Equity
 - Energy Poverty
 - Consent-based Siting
- Others
 - *Container farms in DACs (Chicago, Harlem, etc.)*
 - *Horizon EU projects (demo community decarb)*
 - *EJ OAQPS EPA, cumulative impact (P236)*
 - *EVs2Scale Equity workstream, equity layers in eRoadmap*
 - *LDES DOE projects (publishing lessons learned)*
 - *Fusion forum and community engagement*
 - *LCRI community engagement and local economic impact (in progress)*

▪ Deliverables

- [Equity Across the Energy System 3002027134](#)
- [Equity and EJ for Coal Plant Repowering 3002026486](#)
- [Community Engagement Leading Practices 3002026748](#)
- [Equity and EJ for Delivery Infrastructure Siting 3002026828](#)
- [Equity Metrics Landscape Review 3002026909](#)
- [EJ Community Engagement Fact Sheet 3002028416](#)
- [Fusion Forum Materials](#)
- [Low-cost sensors 003002027062](#)
- [Hydrogen safety fact sheet 3002026599](#)
- [Cumulative Impact Assessment for EJ 003002027076](#)
- [Interactive.epri.com/energy-affordability](#)
- [Air pollution and asthma factsheet 3002028415](#)
- [Permitting cases tracking 3002027771](#)
- [Impacts of Decarbonization 3002026644](#)
- [Evaluation of Mapping/Screening Tools 3002024330](#)
- [Household Kuznet Curves 3002028419](#)

The EPRI logo is displayed in a bold, blue, sans-serif font. The letters are closely spaced, with the 'P' and 'R' having a distinctive shape. The logo is positioned in the upper left corner of the white section of the banner.

EPRI

The background of the banner is a dense grid of small, semi-transparent portraits of diverse individuals of various ethnicities and ages. The portraits are arranged in a staggered pattern and are tinted with a blue color that matches the overall theme of the banner. The grid covers the entire area of the banner, creating a sense of a large, unified community.

TOGETHER...SHAPING THE FUTURE OF ENERGY®

This block contains social media icons for LinkedIn, X (Twitter), and Facebook, followed by the website URL 'www.epri.com'. The icons are small and white, set against the blue background. The URL is in a white, sans-serif font.

in X f
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