



Energy &  
Homeland Security

# Considerations in Permitting

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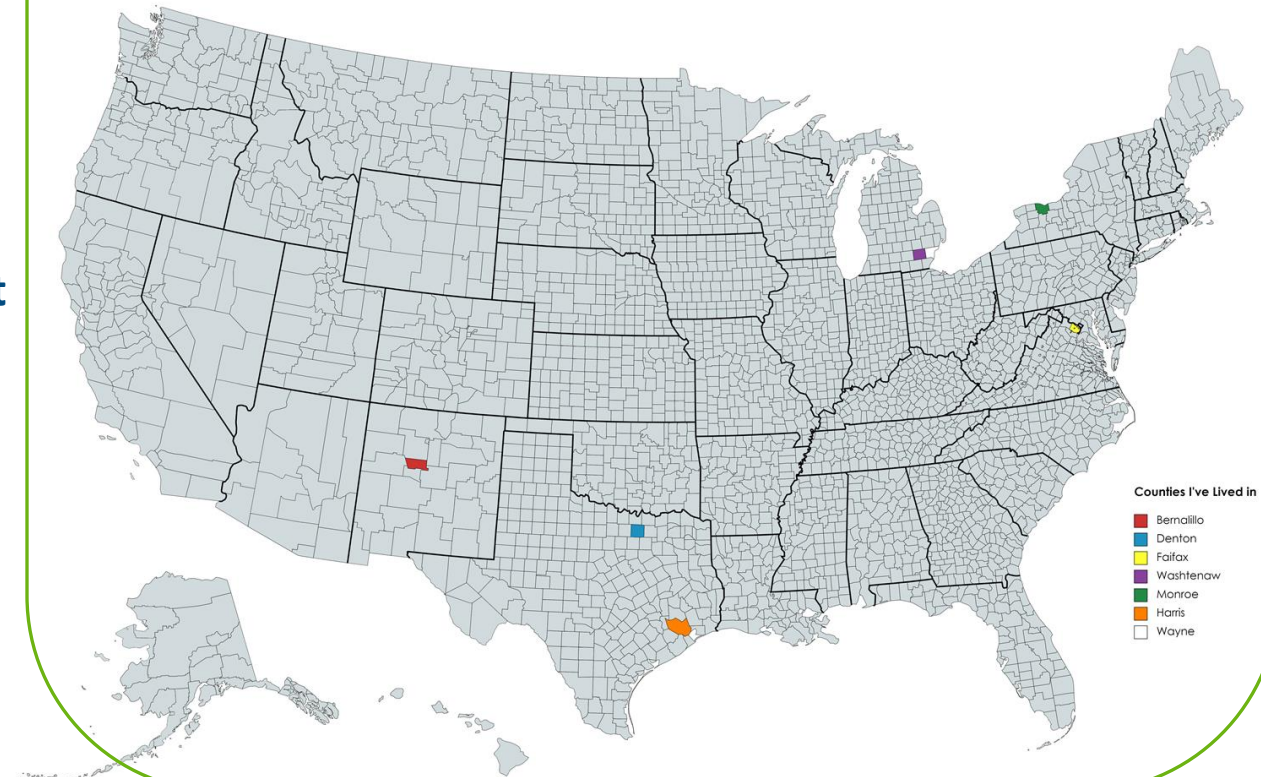




# PERMITTING BACKGROUND IN THE US

- **Construction and operation permits are handled at the micro-local level**
- **Typical process for large industrial projects:**
  - Land Use proposal submitted to city or county
  - Public Meetings may cover the Land Use proposals
  - Pre-permit meetings with City/County Planning, Mayor's office, Building Permit Office, or other Authority Having Jurisdiction (AHJ)
  - Engineering drawings submitted to Permit Office
    - Specific Drawing reviewed by relevant department in Permit Office (Mechanical, Electrical, Fire Protection, etc.)
  - Construction Permit Issued
  - Numerous during –construction Inspections conducted
  - Certificate of Occupancy/Operations Permit Issued

19,495 Incorporated Cities  
3,243 Counties (or county equivalents)  
33 City-County governments





# PERMITTING PROCESS PECULIARITIES

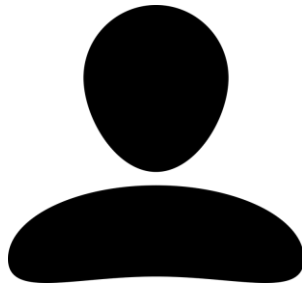
## Land Use proposal approval often involves non-technical people

(real questions I have received from a City Council meeting)

What color  
is the  
hydrogen?



Will you install  
a traffic light  
at the  
entrance?



Tie-breaking  
vote by  
Mayor:  
Approval 5-4



Have you  
heard of  
the  
Hinden....?



What happened with  
that explosion in NC?  
Can you ensure that  
won't happen here?



City Council



# PERMITTING PROCESS PECULIARITIES

## Public Meetings may complicate the messaging and the intentions of the projects

“We are now living in a climate catastrophe with the worst health care in the world,” said Krystal Curley, the executive director of Indigenous Lifeways, an indigenous, woman-led non-profit. **“We cannot afford another boom and bust industry** in McKinley County.”

**“Hydrogen power is not clean nor sustainable,”** Jonathan Juarez-Alonzo, the policy lead for Yucca Action, a non-profit focused on holding elected officials accountable

<https://www.krqe.com/plus/data-reporting/new-mexico-hydrogen-hub-debate-gets-emotional/>

The developer of a \$4.5 billion hydrogen project in Louisiana is in a legal battle with local lawmakers in a case that analysts say could preview conflicts around the country.

“Everybody feels like it was a backdoor deal, it was forced down our throats, **we had no say-so at all.** And you’re doing it in one of the most important things in our parish, which is our waterways and our lake,” said Jeff Ard, one of the council members who voted in support of the moratorium.

<https://www.eenews.net/articles/la-legal-showdown-may-preview-national-battle-over-hydrogen/>

A coalition of local environmental groups is asking the Oregon Public Utilities Commission to **halt plans for an experiment in blending hydrogen** into the natural gas pipelines leading to some west Eugene homes and businesses.

<https://www.registerguard.com/story/news/2022/10/19/opposition-nw-natural-plan-to-blend-hydrogen-with-eugene-natural-gas/69565328007/>

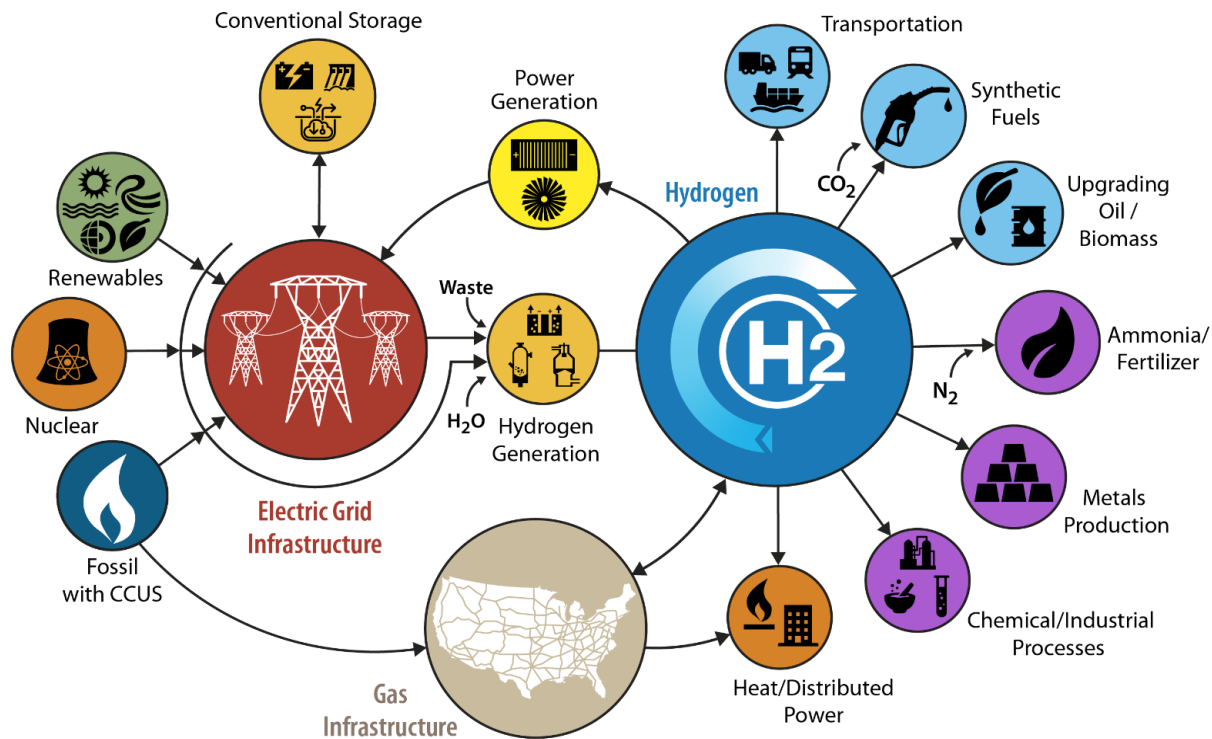
Don't be blind-sided by public opposition





# H2@Scale shows the large variety of applications for H<sub>2</sub>

## H2@Scale shows the large variety of applications for H<sub>2</sub>



### Permits for large scale infrastructure projects

- Span multiple regulatory agencies which could cause confusion over jurisdiction
- Are complex involving new technologies
- Involve uncertainties in the system operation



Could result in lengthy permitting process



# CODE COMPLIANCE IS KEY

## Identifying applicable codes and standards

- Building codes → component specifications
- Complicated for new technology

## Best Practice

- Avoid requesting waivers, exemptions, and exceptions
- Especially when hydrogen applications are new to the AHJ, they may not feel capable of approving an exception or equivalency





## **HYDROGEN-SPECIFIC PERMITTING ISSUES**

- **Lack of knowledge or myth-based understanding of hydrogen at AHJs**
- **AHJs may require additional consequence analyses or nightmare scenario evaluation**
- **Uncertainty and perceived risk may cause delays in permit approvals**
- **Requesting exceptions to the safety regulations may cause denial of permits**
- **Public resistance may impede schedule or approval of permits**
- **Incidents involving hydrogen systems that get wide-spread media coverage may put permit at risk or under more detailed scrutiny or public resistance**



# Questions?