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# Evaluating Community-Led Energy Transitions: Lessons from the Energy Technology Innovation Partnership Project

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# Energy Technology Innovation Partnership Project Program

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**Target audience:** coastal, remote, and island communities, which face:

- high costs,
- aging infrastructure,
- vulnerability to natural disasters
- geographic isolation,
- underinvestment, and
- limited local capacity.

**Program services:** community-driven technical assistance aimed at advancing local energy resilience through co-development, capacity building, and inclusive engagement. Leverages **regionally based partners** and expertise at **national labs**.

# ETIPP Program Goals

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Respond to local energy priorities



Empower communities across stages of their energy journey



Increase knowledge and technical capacity to strengthen self-determination



Strengthen community capacity for long-term energy planning and resilience



Create replicable tools, processes, and lessons learned that can benefit other communities

# ETIPP Structure and Design

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- Launched in 2020, communities apply annually.
- They learn about the program through regional partner organizations.
- National lab staff provide technical assistance tailored to local contexts.
- Intentionally flexible design to meet communities where they are.
- Two TA tracks developed after recognizing diverse starting points:

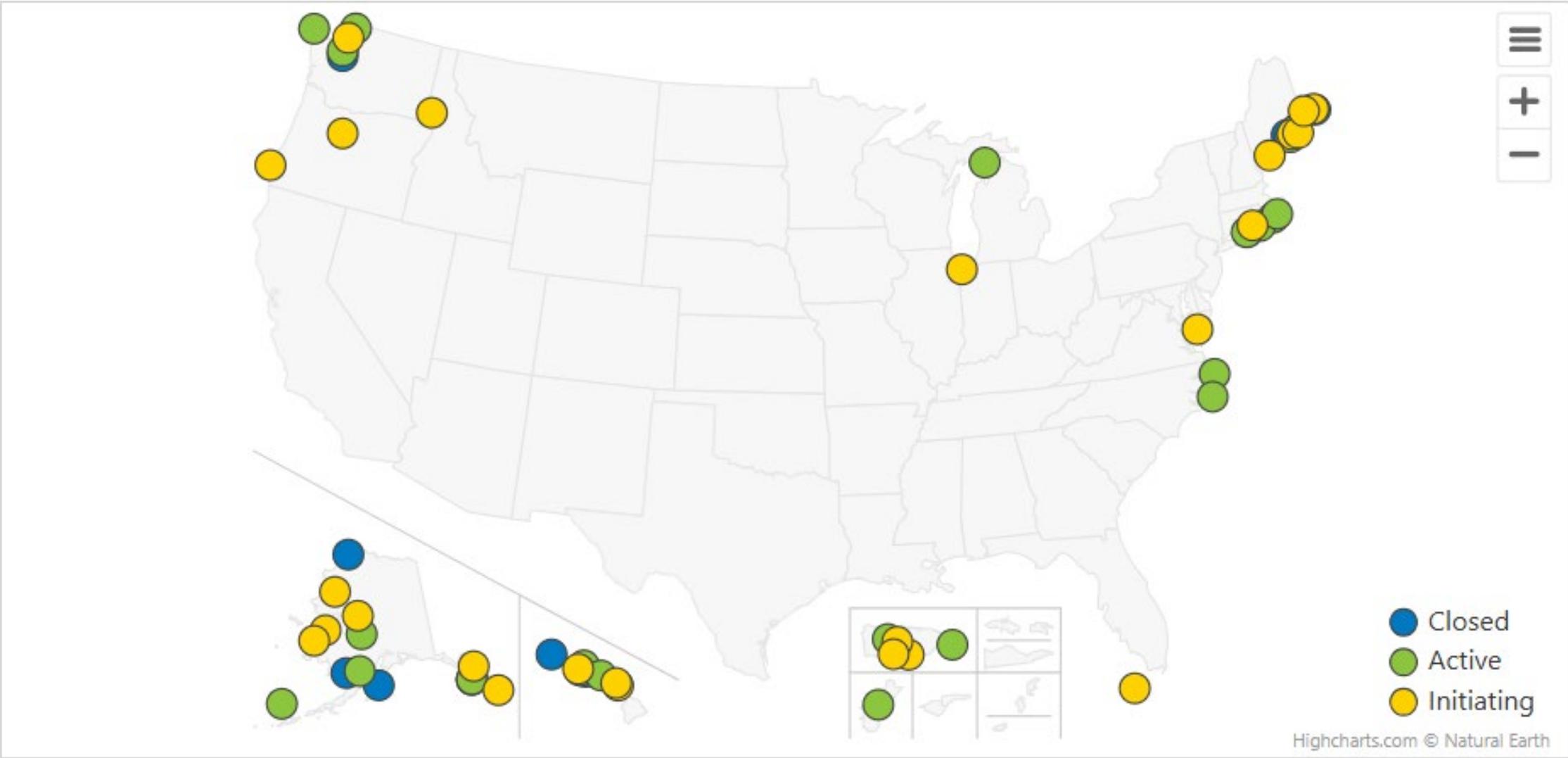
## Strategic Energy Planning

- 4 to 8 months of support
- Communities receive an energy plan

## Deep Dive

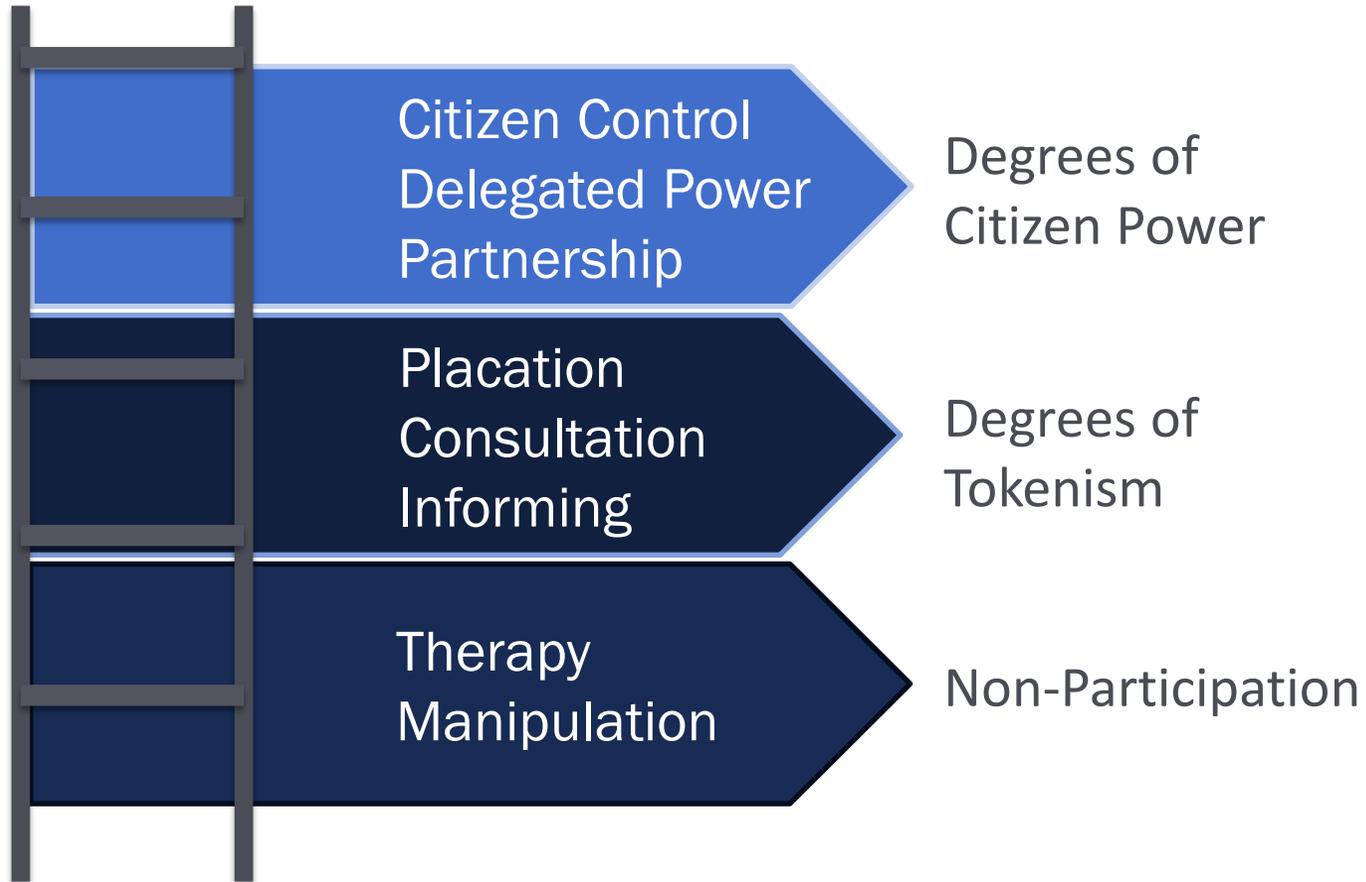
- 12 to 24 months of support
- Communities receive a rigorous technical analysis on a chosen solution

# ETIPP Communities in Cohorts 1–4



# ETIPP's Design Requires Community Engagement

## Arnstein's Ladder of Citizen Participation



- ETIPP operates at higher rungs, focusing on partnership and community-led leadership in energy planning and decision-making.
- Communities are given power and decision-making authority, ensuring their voices significantly impact outcomes.

# Challenges in Evaluation of Community-Based Projects

- “Success” can be defined differently by stakeholder groups
- Capturing intangible outcomes, such as trust.
- Outcomes can be very long-term
- Communities start at different places
- Program attribution of impacts
- Risk of oversimplification of a complex process



# Developmental Evaluation to the Rescue!

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- Rather than judging success based on fixed metrics or pre-established goals, developmental evaluation supports **real-time learning, adaptation, and strategic decision-making as a program unfolds.**
- Coined by evaluation theorist Michael Quinn Patton (2011), developmental evaluation **embeds evaluative thinking directly into the team or system being studied.** This allows stakeholders to gather and **reflect on data continuously, respond to emerging challenges, and adjust strategies** while staying grounded in evidence and context.

# UTOPIA Principles

The principles of WISE enable program optimization in a complex and changing landscape without delay

## Utilization-Focused

Actionable insights enable program iteration and optimized results

## Timely

Concurrent monitoring facilitates course correction and progress without pause

## Systems Outlook

Embeds analysis within larger ecosystem context

## Complexity Perspective

Methodologies reflect interconnected dynamics of baseline and emerging conditions

## Independent

Independent, implementer-agnostic third-party evaluation oriented toward outcomes and with no vested interests

## Adaptive

Leading insight delivery through changing conditions

# Developmental Evaluation Allows Us To

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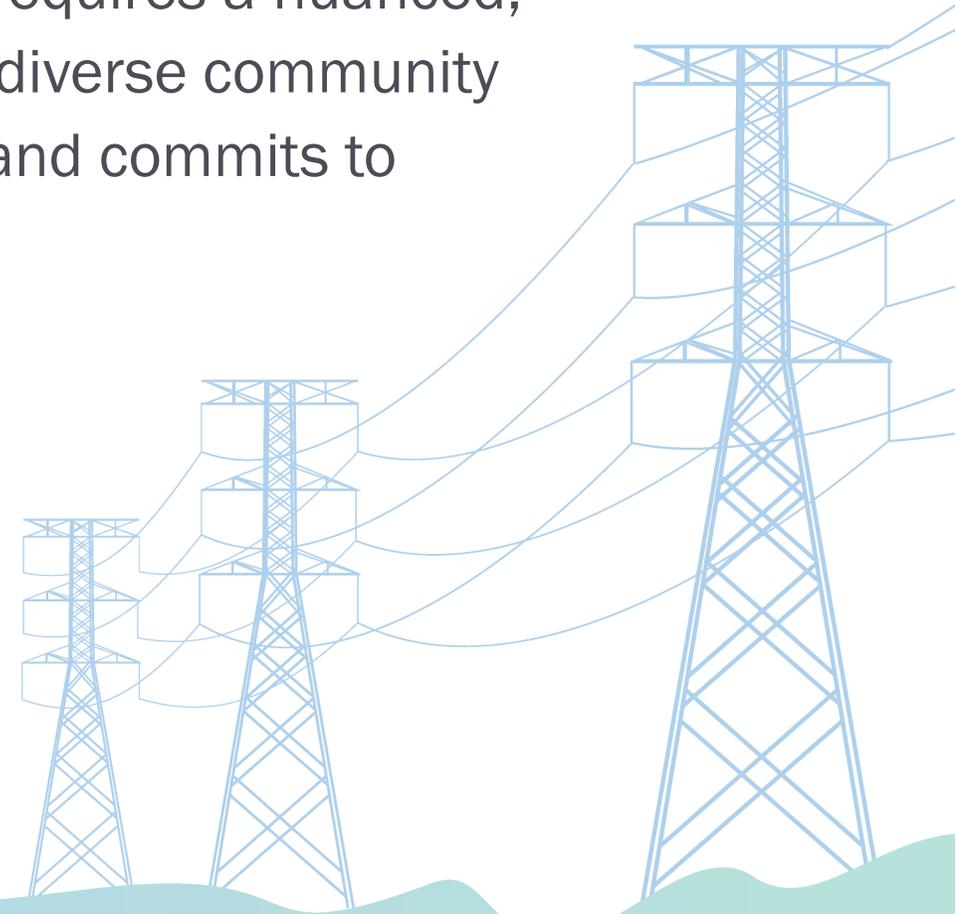
- Emphasize real-time feedback and iterative learning,
- Support program adaptation in dynamic environments,
- Recognize the value of emergent outcomes,
- Prioritize use-oriented insights over rigid accountability, and
- Align with complex systems thinking and community-led innovation.

# Conclusion

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Measuring success in community-based energy projects requires a nuanced, flexible, and participatory approach, one that recognizes diverse community contexts, values both tangible and intangible outcomes, and commits to long-term follow-up.

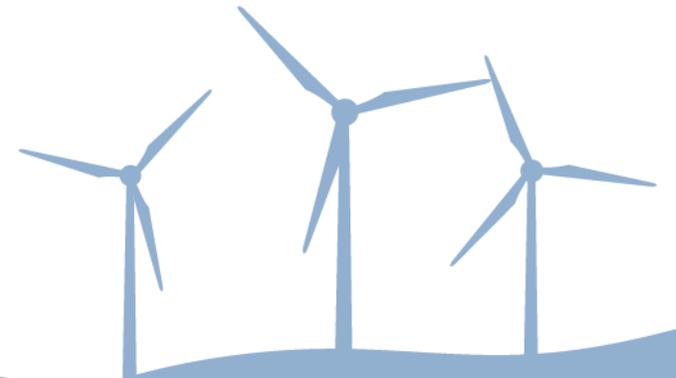
Meaningful evaluation goes beyond mere metrics; it embraces the complexity, diversity, and human aspect of this work. By integrating developmental evaluation with participatory and process-oriented methods, programs can more genuinely reflect community realities and ensure efforts are measured and understood.





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