

The PEV Dialogue Group's Action Plan

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EV Joint Work Groups Meeting



C2ES.ORG



- **Independent, nonpartisan, nonprofit organization**
- **Working to advance strong policy and action to address the twin challenges of energy and climate change**
- **Founded in 1998 as the Pew Center on Global Climate Change**
- **Became C2ES in 2011**
- **Named world's #1 environmental think tank in 2011 (Univ. of Pennsylvania survey)**

Business Environmental Leadership Council (BELC)



- **C2ES convened the PEV Dialogue Group in early 2011**
 - Leaders from public and private sectors and NGOs
- **Initiative aims to accelerate PEV deployment nationwide by focusing on:**
 - Regulatory environment
 - Charging infrastructure
 - Consumer awareness
- **Doesn't duplicate other efforts and avoids favoring certain PEV technology**

A123 Systems
AASHTO
Argonne National Laboratory
The Alliance of Automobile Manufacturers
Better Place
Center for Climate and Energy Solutions
City of Raleigh
Daimler
U.S. Department of Energy
Edison Electric Institute (EEI)
Electric Drive Transportation Association (EDTA)
Electrification Coalition
Electric Power Research Institute (EPRI)
General Electric
General Motors
Georgetown Climate Center

Indiana Utility Regulatory Commission*
Johnson Controls Inc.
Metropolitan Washington Council of Governments
Michigan Public Service Commission*
National Wildlife Federation
North Carolina Department of Transportation
Northeast Utilities System
Natural Resources Defense Council
NRG Energy
PJM Interconnection
Rockefeller Brothers Fund
Southern California Edison
U.S. Department of Transportation
University of Delaware
Washington State Department of Transportation

** The role of these group members must be limited to technical contribution because of their organizational function.*

- **PEV Dialogue Group identified major market barriers and collaborated on Action Plan development**
 - Provides a roadmap for coordinated public and private sector action at state and local levels to ensure PEV owners can plug in their cars without overtaxing the grid
- **Action Plan lays out steps to enable a national PEV market by:**
 - Creating a Consistent Regulatory Framework Nationwide
 - Optimizing Public and Private Investments in Charging Infrastructure
 - Facilitating PEV Rollout
 - Educating Consumers



- **Identified 4 focus areas**

- Connect PEV Leaders around the Country
- Advise Individual PEV Efforts
- Driver Behavior Analysis
- Consumer Education Strategy

- **To date, 3 projects lined up with key stakeholders**

- Conduct PEV Stakeholder Connection Initiative with U.S. DOE's Clean Cities
- Run multiple PEV-related workshops with U.S. DOT and 7 state DOTs
- Author literature review for and advise Northeast Electric Vehicle Network

- **In discussions with key stakeholder on work related to driver behavior analysis and consumer education**

Creating a Consistent Regulatory Framework Nationwide

Objectives: Harmonize regulatory action; determine if existing rules and regulations for use of and payment for infrastructure need revision

- **Protect the Reliability of the Electrical Grid**
- **Minimize Cost to the Electricity Distribution System**
- **Encourage Transportation Electrification**
- **Provide Consistent Treatment of PEVs with Comparable Power Requirements within each Rate Class**

Should PEV service providers be regulated as utilities?

- Not unless they act as utilities. That is, if a PEV service providers wishes to procure electricity at wholesale, then they should be subject to the same regulations as any other entity with access to wholesale markets.
- State and local government should require typical consumer protections related to market competition.

*How will
utilities
manage
demand?*

Early Adopters:

- PUCs and utilities should offer rates to encourage adoption and off-peak charging.
- Utilities, NGOs, and state government should run education campaigns on the public and private benefits of off-peak charging.

Mainstream Consumers:

- PUCs and utilities should encourage off-peak charging and pricing plans that were effective for early adopters.

How will PEV drivers contribute to transportation infrastructure maintenance?

Early Adopters:

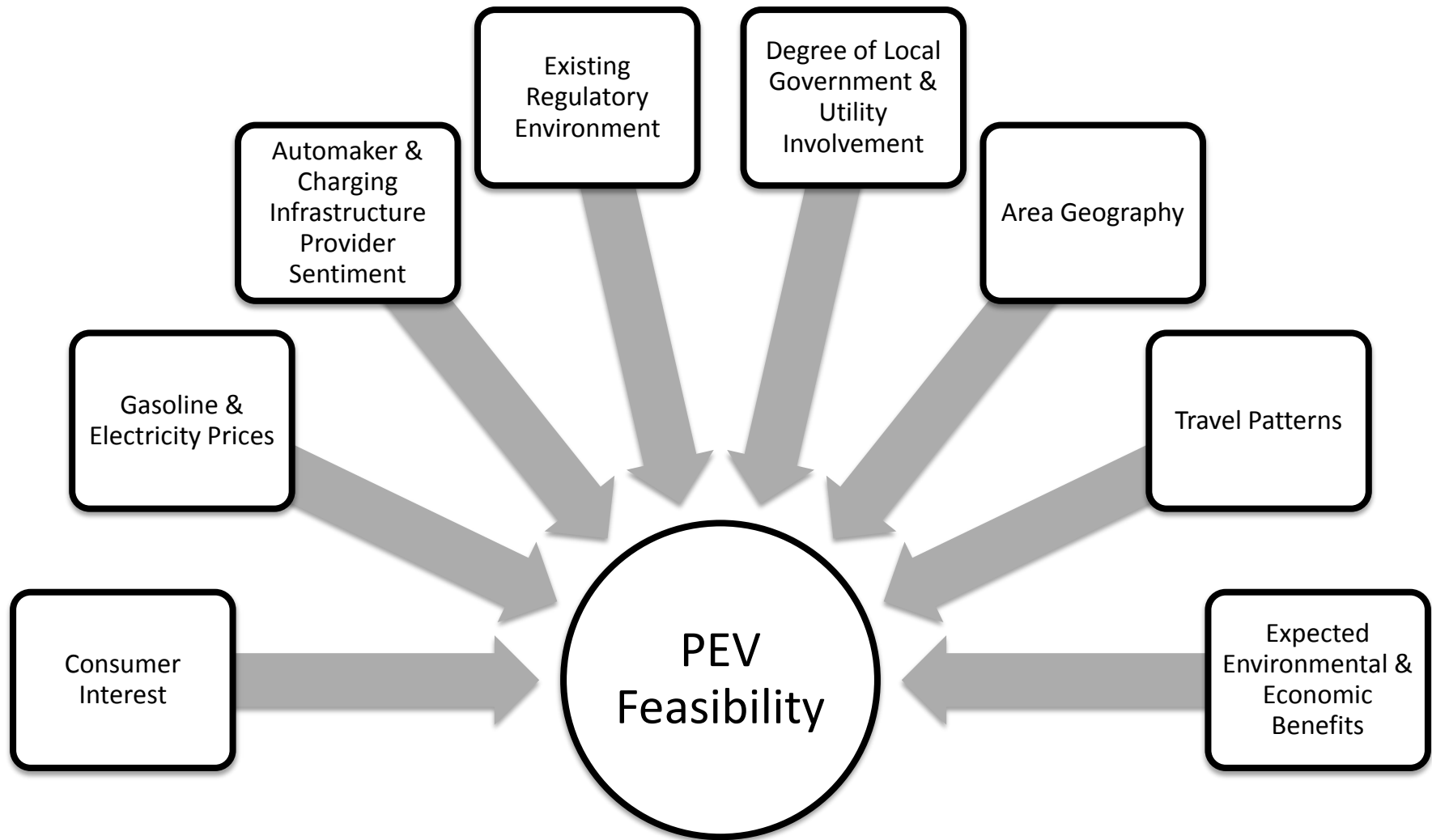
- NGOs, PUCs, electric utilities, and state and local government should define a suitable method for estimating or determining mileage data and payment collection that continues to encourage efficient vehicles similar to the existing motor fuel tax
- Consider transitional actions for some areas. Proposals should aim to minimize impact on PEV market growth in the short term.

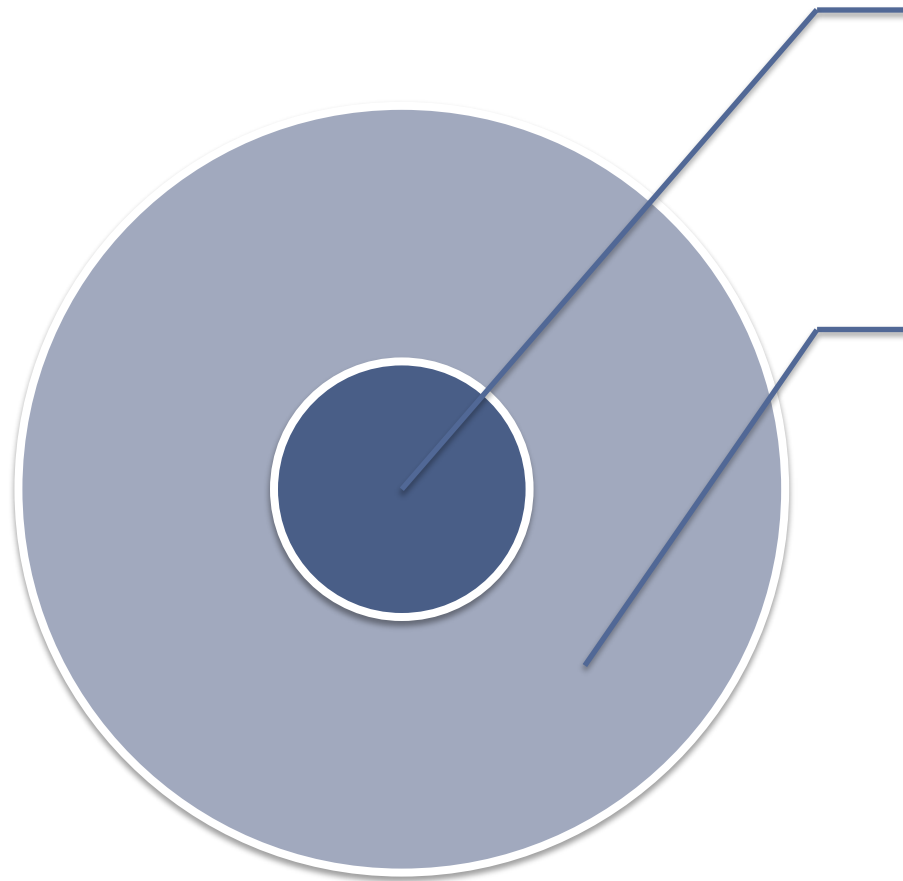
Mainstream Consumers:

- State government should enact a method based on effectiveness, consumer acceptance, and technological feasibility.

Optimizing Public and Private Investments in Charging Infrastructure

Objectives: Accelerate sustainable private sector investment in charging infrastructure; balance efficiency and equity





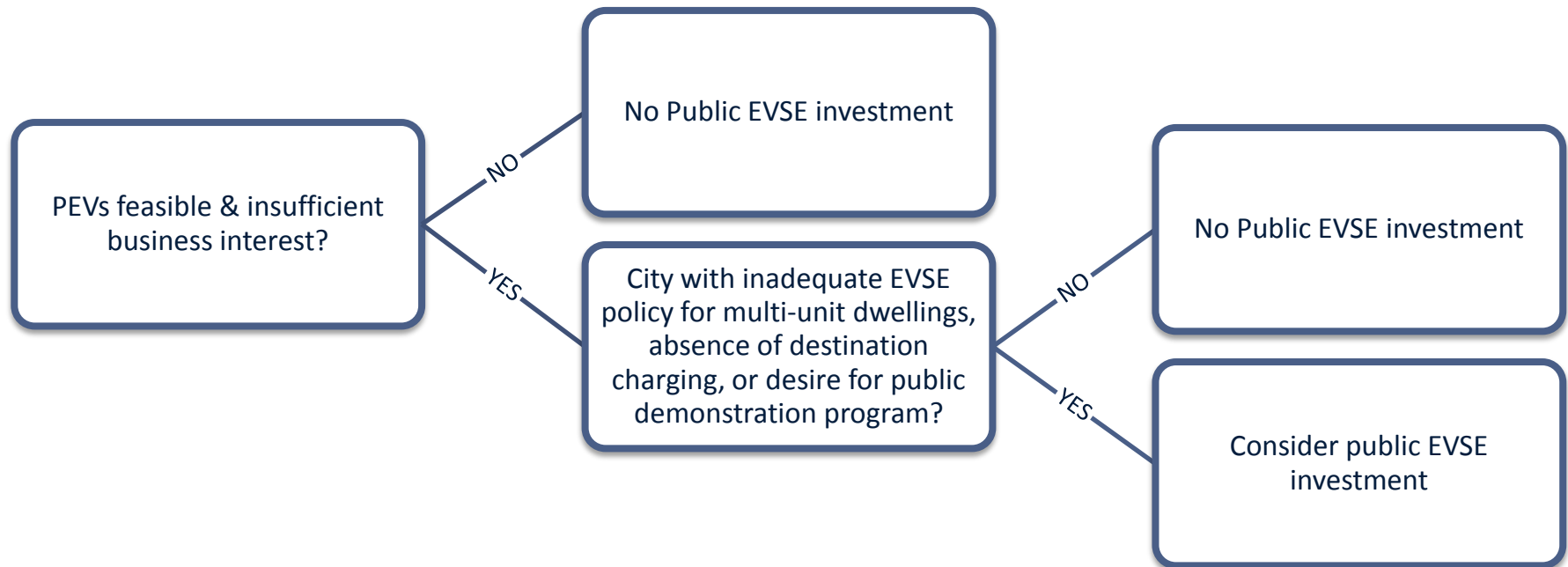
Minimum Approach

- BEV: home and workplace with some public charging for range anxiety
- PHEV: home and/or workplace charging; no public charging

Maximum Approach

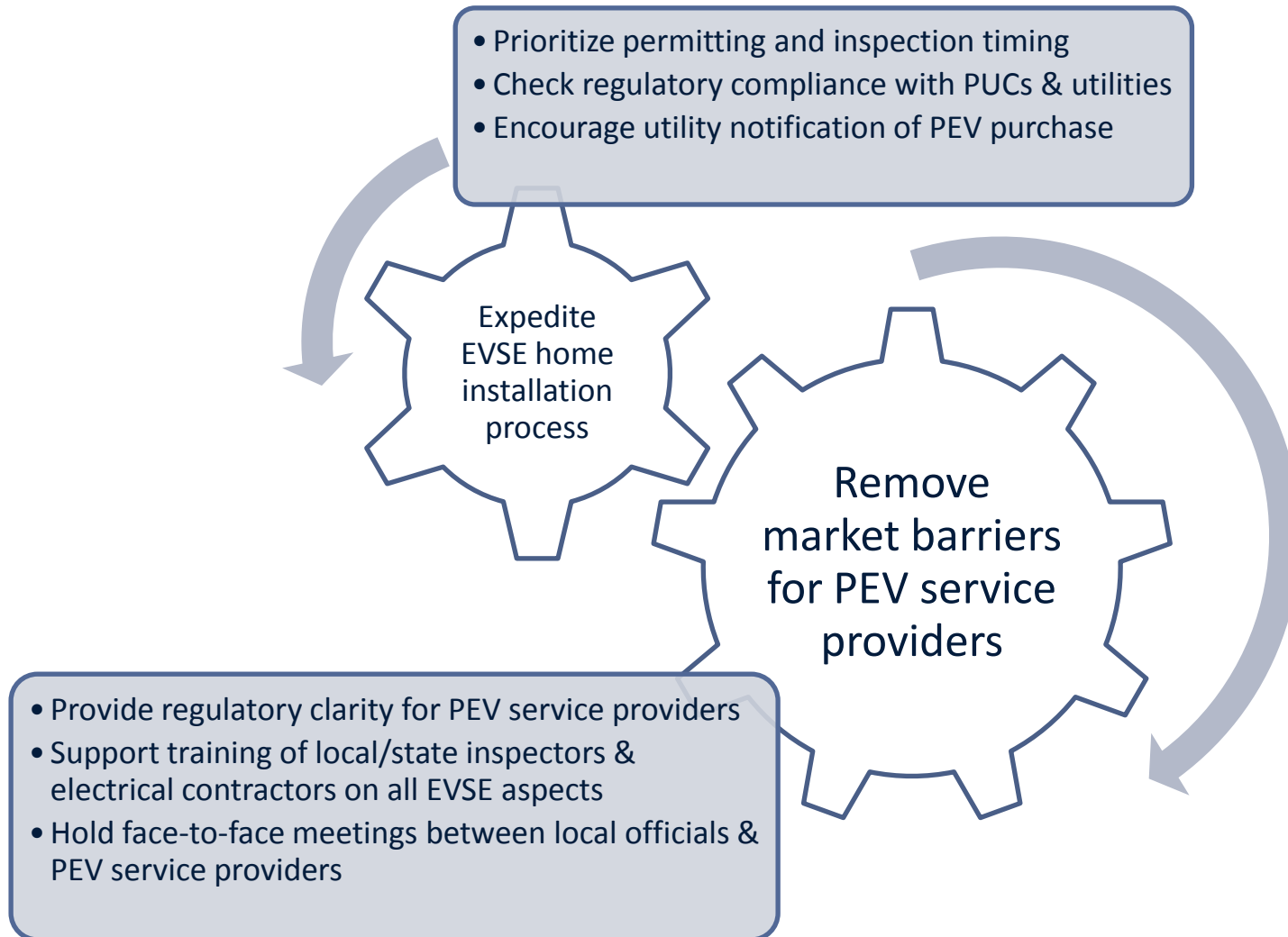
- PHEV/EREV/BEV: home & workplace, public charging at major retail outlets, curbside, public parking lots, and major destinations

Estimate the Extent of Public Investment in EVSE



Facilitating PEV Rollout

Objectives: Define vehicle and fuel purchase process



Educating Consumers

Objectives: Explain value proposition; bridge technology information gap

Create Tools to Help Consumers Understand PEV Value Proposition



Increase PEV Publicity

Test drive events

Exhibits at auto shows, shopping malls,
science museums, city centers

Publicize independent consumer guides
for PEVs

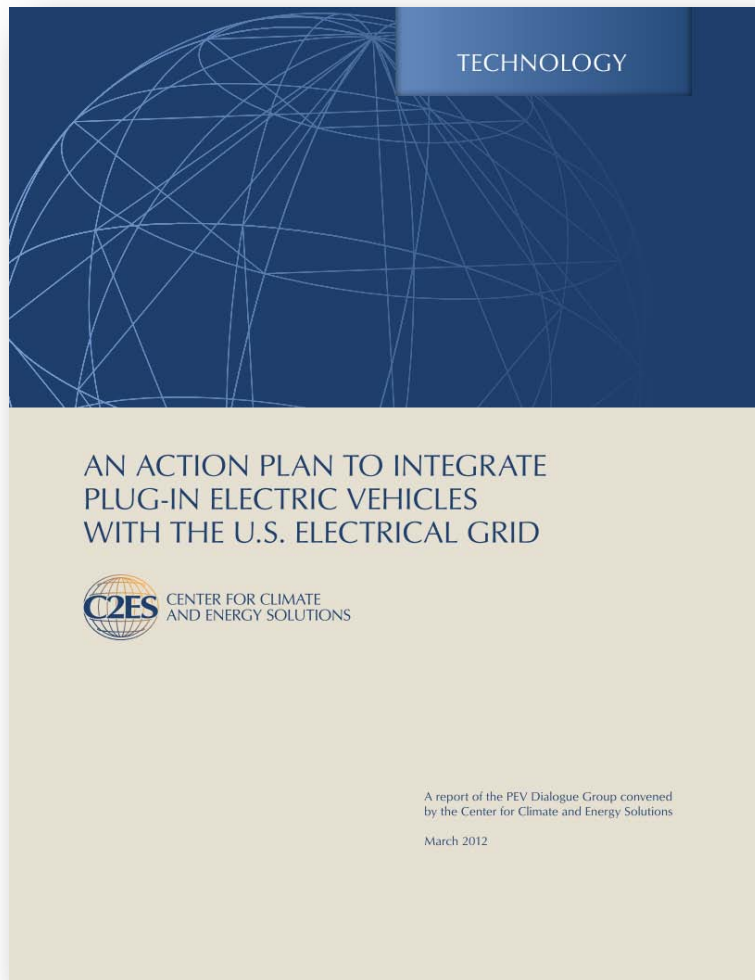
Local advertising & media outreach

Enhance Stakeholder Collaboration

PEV service providers & utilities inform
customers about rate packages,
incentives, & infrastructure upgrades

PEV service providers, utilities, & local
government inform consumers about
home EVSE installation process.

Automakers & auto dealers provide
accurate message about PEV
capabilities



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