

Connecting Livable Communities: Creating a Model at the Tacoma Dome Station

Presentation to HUD Region 10 Director Mary McBride
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“The 2011 oil shock: More of a threat to the world economy than investors seem to think.”

--Headline in the Economist March 5, 2011



The Cost of Gasoline Will Rise

Last year former Shell CEO, John Hofmeister, predicted gasoline prices of \$5 a gallon by November 2012 due to higher demand for gasoline worldwide -- especially in Asia.

- President Obama at Georgetown University, March 30: “...the ups and downs in gas prices historically have tended to be temporary. But when you look at the long-term trends, there are going to be more ups in gas prices than downs in gas prices. And that’s because you’ve got countries like India and China that are growing at a rapid clip...”

“Triple-digit oil prices in 2008 helped push the industrialized world into recession.”

-- Wall Street Journal January 3, 2011

“Rising Oil Prices Threatens Fragile Recovery”

--Financial Times January 5, 2011

"Oil prices are entering a dangerous zone for the global economy. Oil import bills are becoming a threat to economic recovery. This is a wake-up call to the oil consuming countries."

-- International Energy Agency

LA Times April 6, 2011: “White House fears gas prices could tank Obama”

“Rising prices at the pump are a new political obstacle to the president's reelection. He is trying to defuse the situation by reassuring the American people he has a plan to draw down costs.”

“To reduce oil dependence,
nothing would do more good more
quickly than making cars that
could connect to the electric grid.”

— David Sandalow, Assistant Secretary, U.S.
Department of Energy

Ford and GM Electric Vehicles



Needed: A Whole Systems Approach

- HUD/EPA/DOT Livable Community planning grant for Tacoma Dome Station
- DOE/INL electric vehicles project
- DOE/DOD Joint Base Lewis-McChord proposal
- GSA coordination of vehicle procurement
- DOT funding for electric vehicle vanpools
- The Interstate 5 Electric Highway
- Cisco, Microsoft, Ford, GM connected vehicles

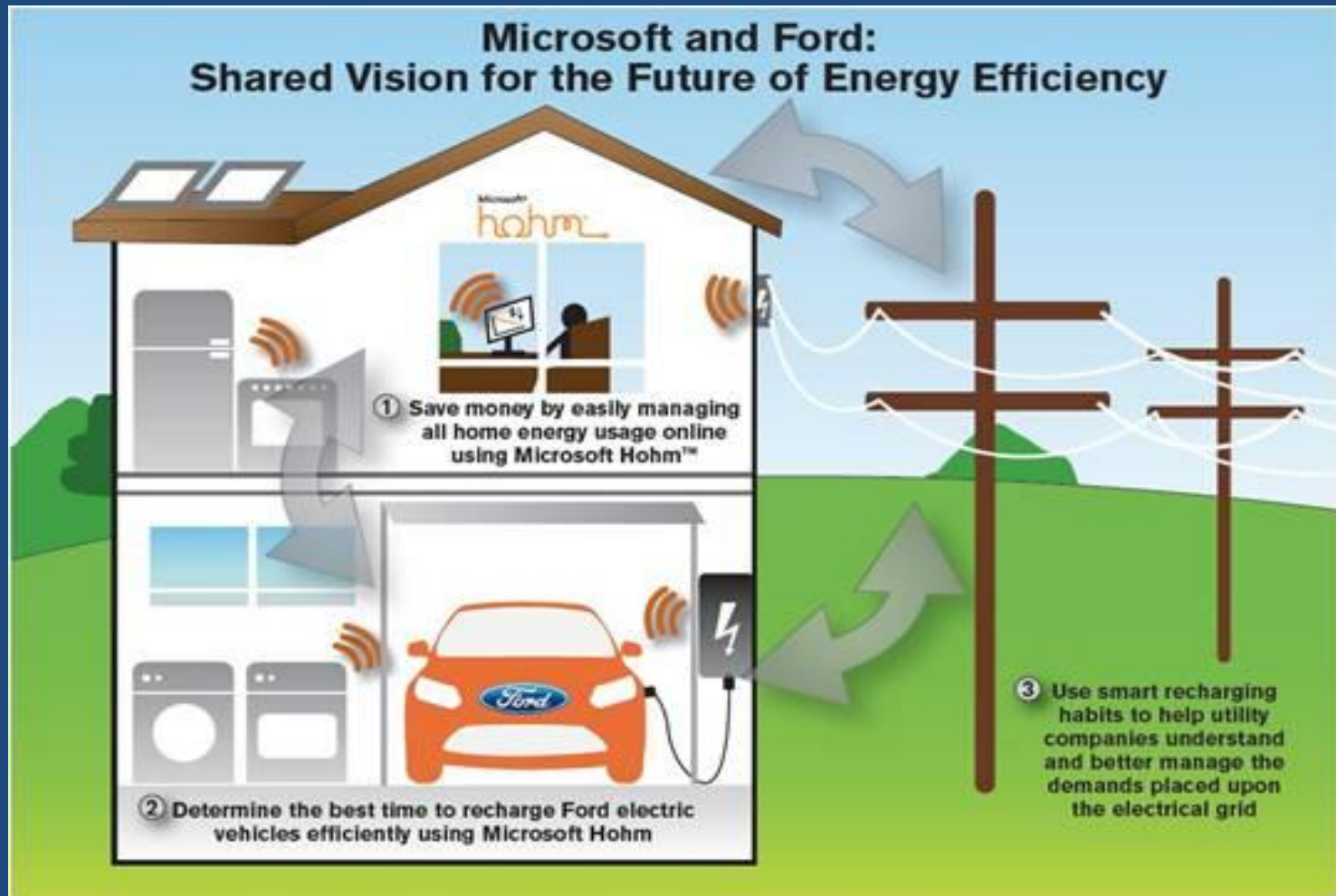
Connecting Tacoma Dome Station: Federal Partnership Approach

- The Internet cloud +
- Interstate highway system +
- Urban transit +
- EPA fuel and emission standards +
- HUD Livable Communities partnerships +
- DOE/ Idaho National Laboratory EV research +
- Department of Defense demonstration projects
- Department of Commerce NIST standards

Smart, Connected Electric Drive Vehicles

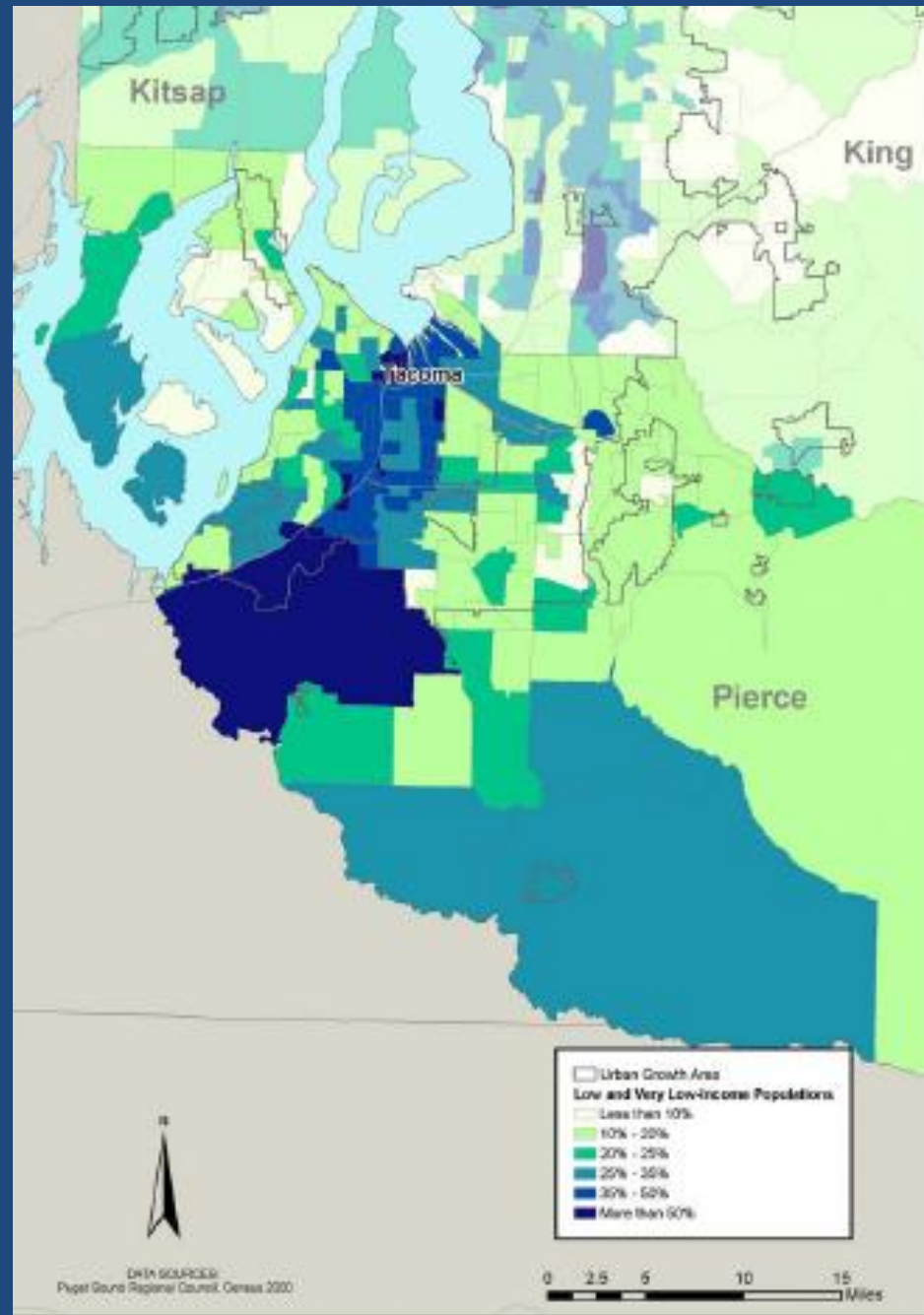
- Oil imports not needed to power cars.
- Congestion control through fees on roads and parking.
- Transit and driving options known before each trip.
- Vehicle location/movement feeds traffic reports via smart phones, message signs and in-car device reports.
- Safe, hands-free passenger voice & data while moving.
- When and where to recharge EV batteries.
- Collision avoidance built into cars and intersections.
- Faster & more informed emergency response.

Integrating EVs and the Power Grid



Low and Very Low Income Population in Pierce County

- 2011 Census shows increasing metro region dispersal
- Note the location of Joint Base Lewis-McChord



Department of Defense: Energy and Transportation Initiative

- Goals: energy security and zero fossil fuel use
- Joint Base Lewis-McChord proposal
- Electric drive vehicles
- Hybrid energy systems
- Smart connections

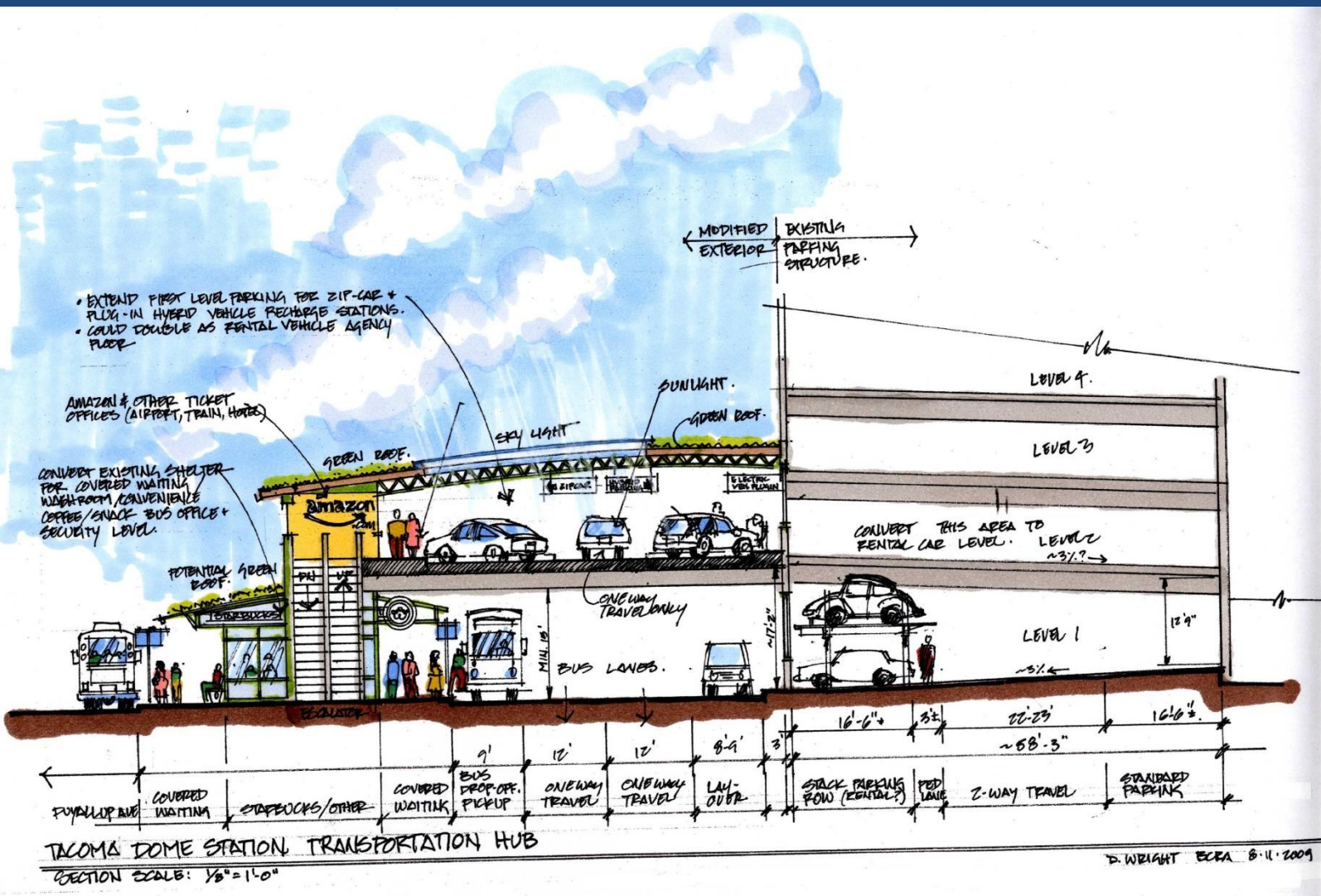
Joint Base Lewis-McChord (JBLM) Top 3 Sustainability Goals

- AIR QUALITY
 - Reduce non-tactical motor vehicle air emissions 85% by 2025
- ENERGY
 - Reduce total energy consumption by 30% by 2015
 - Sustain all activities on post using renewable energy sources and generate all electricity on post by 2025
- SUSTAINABLE COMMUNITY
 - Create sustainable neighborhoods for a livable Fort Lewis community that enhances the Puget Sound Region

Tacoma Mobility Hub



Tacoma Mobility Hub



Tacoma Mobility Hub



Smart Growth and Livability Summary from Center for Advanced Transportation Solutions

- Connect advanced transportation options more directly to urban and regional housing planning.
- Support incentives for electric drive and low-emission vehicles including additional mobility hubs.
- Support smart, connected and safer vehicles with increasingly automated capabilities.
- Promote connected and integrated ridesharing, van pooling, cycling, rapid transit and other congestion reduction methods.
- Test variable road use fees and related tools to better utilize road capacity and manage peak traffic flows.
- Provide additional financing for transportation/mobility hubs with public/private partnerships.

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