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Not a likely workshop for this conference....

1. Why should we care about energy?

New Partners for Smart Growth

- 2. How are smart growth and energy related?
- 3. What is the best way to address this opportunity in our communities?





Why should we care about energy?

- "Peak Oil", "End of Oil"...when will world oil production peak?
 - 2010? 2016? before 2020? Not till 2040? Relatively soon. U.S. oil production peaked in 1970 – almost 60% of the oil we now use is imported.
 - So years ago the world consumed 4 billion barrels of oil/year-& average rate of finding new oil fields was around 30 billion barrels/year. Today, we consume 30 billion barrels/year and the discovery rate is dropping toward 4 billion barrels/year.
 - Output from 33 of the world's 48 largest oil producing countries is declining.
 Global oil demand is increasing.
 - Bottom line = lack of transparency in the world oil markets we're not sure...

But, Why Wait? Many benefits to reducing fossil fuel use



Energy Problems Have Found Their Way into Every U.S. Household

- Historically high gasoline prices, blackouts, rising heating, air conditioning Costs (gas now \$.46 higher per gallon than year ago; natural gas on rise)
- Foreign oil dependence a national security concern We import oil from unstable and hostile nations
- nations Energy dependence exposing our vulnerability Gulf Coast 0il Infrastructure (losing 25% of domestic orude oil production and 10% of refining capacity)

 - capacity) Growing competition for world oil supplies The U.S. has less than 5% of the world's population and uses 25% of the world's oil China has 21% of the world's oil China has 21% of the world op and uses 8% of to ensumption 8% year.





Environmental Implications Mobilizing Communities into Action

- Air Quality: Transportation emissions major contributor to unhealthy levels of ozone (code red days); electricity generation from coal plants significant source of air pollution. Hundreds of counties in nonattainment.
- Global Warming: Increased scientific evidence that climate disruption is already occurring. Over one-fourth of U.S. generated GHG emissions comes from transportation. Increased awareness of climate change on the part of Americans.





New Opportunities for Partnerships

- Several U.S. states and 199 Mayors have set greenhouse gas reduction goals - need measurable activities
- Hundreds of counties looking for ways to reduce criteria air pollutants
- Over 20 states have RPS growing market for renewables
- Economic development opportunity/jobs





Where Does Smart Growth Fit In?

Suburban sprawl has grown up around abundant and cheap sources of oil. Now, land-use patterns trap us in expensive, energy demanding behaviors that are difficult to alter.

> Can the built environment help rather than hinder our energy, environmental and quality of life goals?





Energy and Smart Growth: Our Expertise is Needed!

Smart growth – Many advantages

- Compact development more energy efficient
- More transportation choices -- less energy intensive (transit, biking, walking, reduced VMT)
- Mixed use TOD local retail, recreation, and employment opportunities
- More efficient use of infrastructure





The Next Step... Smart Growth Could Become Even Smarter – `*Energy Smart Growth'*!

- Paying more attention to how we build in addition to where we build (e.g. green building design, solar orientation)
- Inclusion of **energy in local comprehensive** plans/**Energy resources planning** (e.g. Burlington VT, CA)
- Consideration of **renewable energy generation** potential (co-generation and energy supply) in zoning, siting, and development decisions
- Green space, green roofs, cool roofs
- Affordable housing keeping down the cost of operating homes (e.g. heating bills, transportation costs)



How We Build: Size matters!

(The rise and fall of the McMansion)

- Size of the average home has increased 55 percent (to 2,330 square feet), while the size of the average family has decreased 13 percent since 1970.
- 40 percent of homes in 2001 had a square footage greater than 2000 sq. ft.

Larger homes = more energy

 Households with an average of 1750 sq feet used 93.5 million BTUs per household in 2001. Homes with an average of 3226 sq feet used 126.8 million BTUs per household in 2001.



'Energy Smart' Growth

- Where and How we grow has tremendous bearing on our energy needs now and in the future. Local planning decisions impact national energy efficiency and energy independence goals.
- 2. Energy considerations improve local livability and a community's success at responding to energy price increases and supply shifts.
- 3. Opportunities for collaboration with energy professionals, climate change reduction policy-makers, green building designers, affordable housing experts, will strengthen smart growth movement.
- A growing body of literature and tools (APA, CCAP, AIA, EESI, RMI, Placematters.com,USGBC).



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