

# The Role of Planning in the New Energy Era

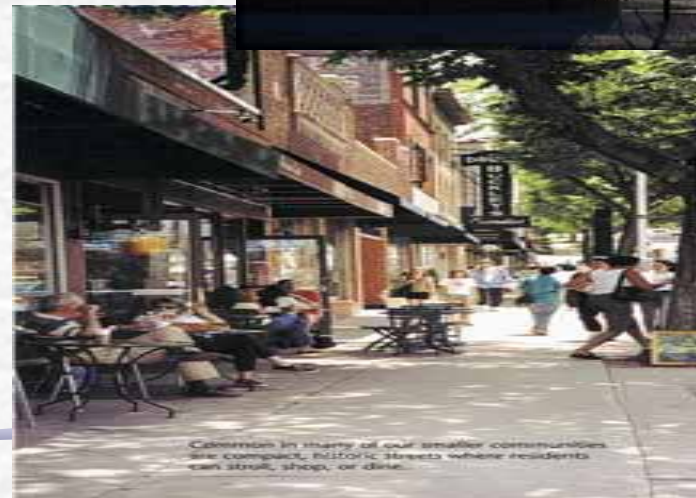
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*2006 APA National Conference*

# Energy has not been high on the planner's agenda....Is this changing?

1. What is the status of the energy/planning connection?
2. What is the best way to take advantage of this opportunity in our communities?



Common in many of our smaller communities are compact, historic streets where residents can stroll, shop, or dine.

# Environmental and Energy Study Institute (EESI)

non-profit organization promoting environmentally sustainable societies. EESI pursues innovative public policy initiatives through coalition building, publications, Congressional briefings, peer networks, workshops and task forces.



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# Energy and the General Population:

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

- Historically high gasoline prices, blackouts, rising heating, air conditioning costs (crude oil above \$70/barrel; natural gas prices on rise)
- Our vulnerability exposed
  - Gulf Coast Oil Infrastructure (losing 25% of domestic crude oil production and 10% of refining capacity)



# Oil Dependence a National Security Concern

## ➤ 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 pop and uses 8% of the world's oil supply—China's avg. increase in oil consumption 8% year.*

## ➤ Peak Oil: 2010? 2016? before 2020? When will world oil production peak?

- U.S. oil production peaked in 1970 – almost 60% of the oil we now use is imported.
- 50 years ago the world consumed 4 billion barrels of oil/year—& average rate of finding new oil fields was about 30 billion barrels/year. *Today, we consume 30 billion barrels/year and the discovery rate is dropping toward 4 billion barrels/year.*
- Lack of transparency in world oil markets.



# Environmental Implications of Energy Use

- **Air Quality:** Burning of fossil fuels for transportation and for electricity generation major contributor to unhealthy levels of ozone (code red days). *Hundreds of counties in nonattainment with 8-hour ozone and PM 2.5 standards.*
- **Global Warming:** Increased scientific evidence that climate disruption is already occurring. U.S. GhG emissions have increased by 16% since 1990. Significant growth in emissions from **transportation and electricity generation**. From 1990-2004, transportation CO2 emissions represented 40% of the growth in total energy-related CO2 emissions.

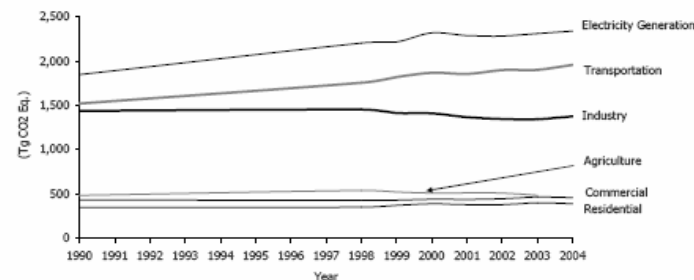
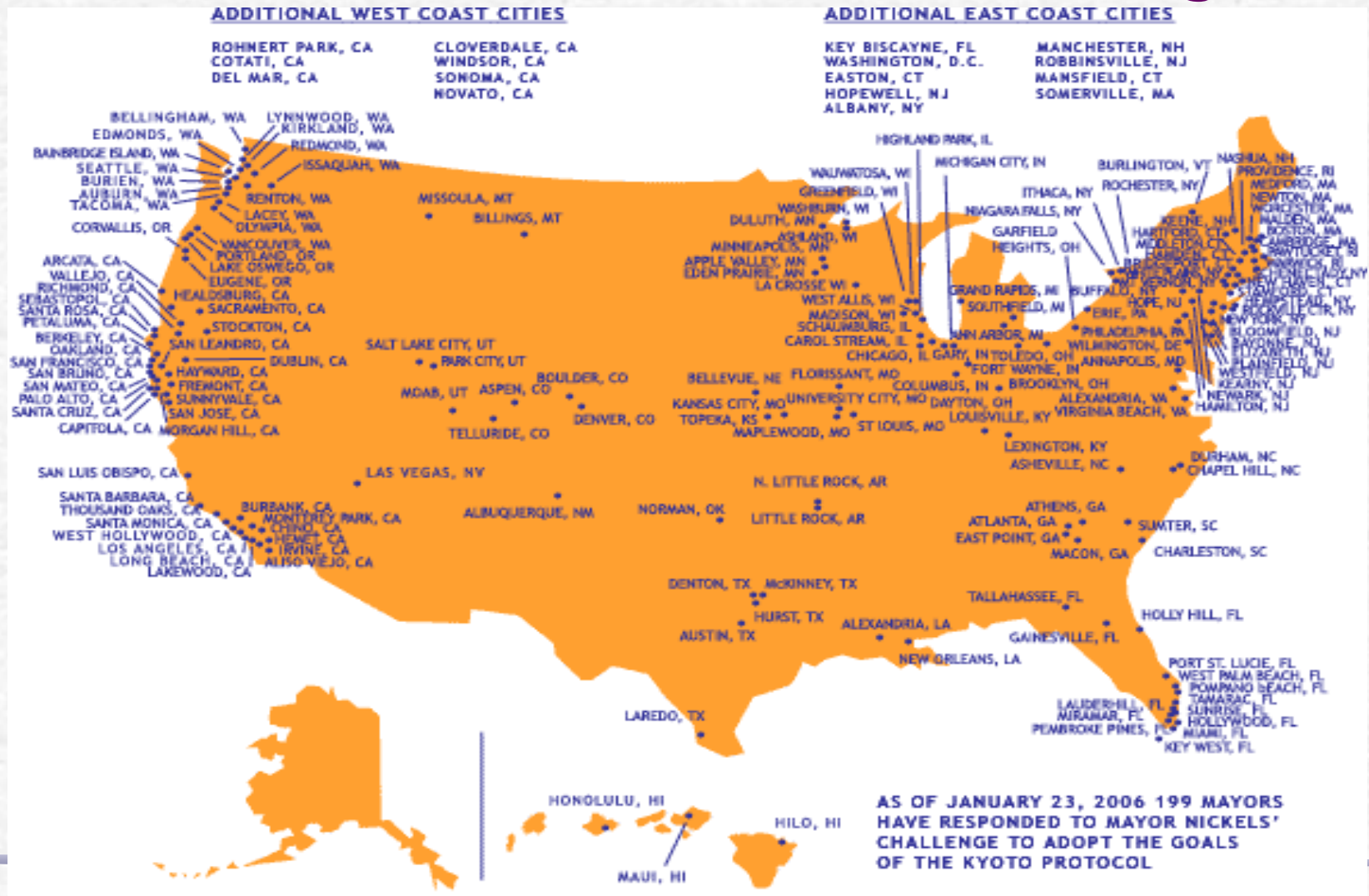


Figure ES-13: Emissions Allocated to Economic Sectors  
Note: Does not include U.S. territories.

# Growing Concern about Climate Change

- ☛ **According to 2006 National polls** (Gallup; Time; and Ayres, McHenry and Associates):
  - **85% of Americans say global warming is probably happening**
  - **More than half (53%) say global warming is due to human activity rather than natural cycles**
  - **62% say they worry a great deal or a fair amount about greenhouse effect** (up from 51% in 2004)
  - **68% say the government should do more to address this problem; 87% support tax breaks for water, wind and solar energy**
- ☛ **Several U.S. states** (e.g. CA, OR, WA, NY, MA, NM, N.E.) **and 220 Mayors have set GhG reduction goals**
- ☛ **Legislative Initiatives on Capitol Hill.**

# Local Action on Climate Change

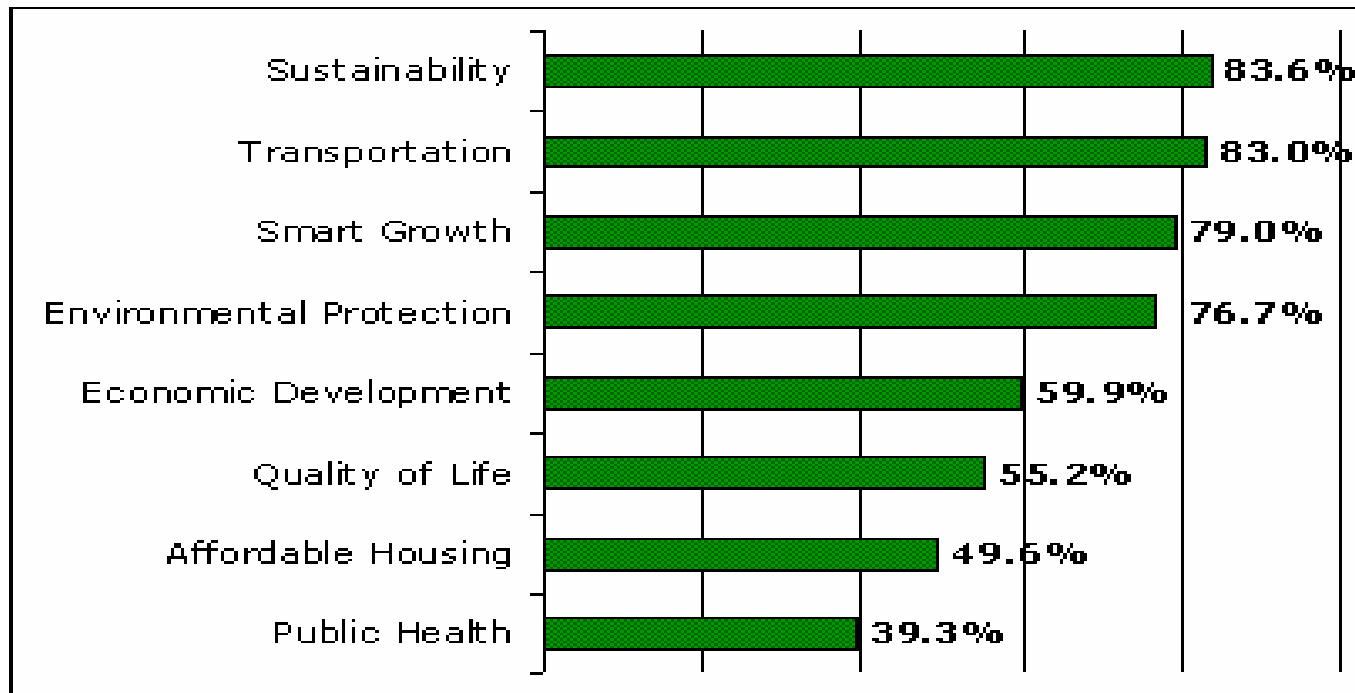


# What do Planners Think?

- **APA/EESI Survey of 5,000 U.S. planners, August 2005**
- Nearly 8% return rate
- Majority respondents public sector planners working for local or regional government
- **Nearly 95% of planners stated they believe energy issues are “very” or “somewhat” connected to their jobs as planners (65% “very connected” 30 % energy issues are “somewhat” connected.)**

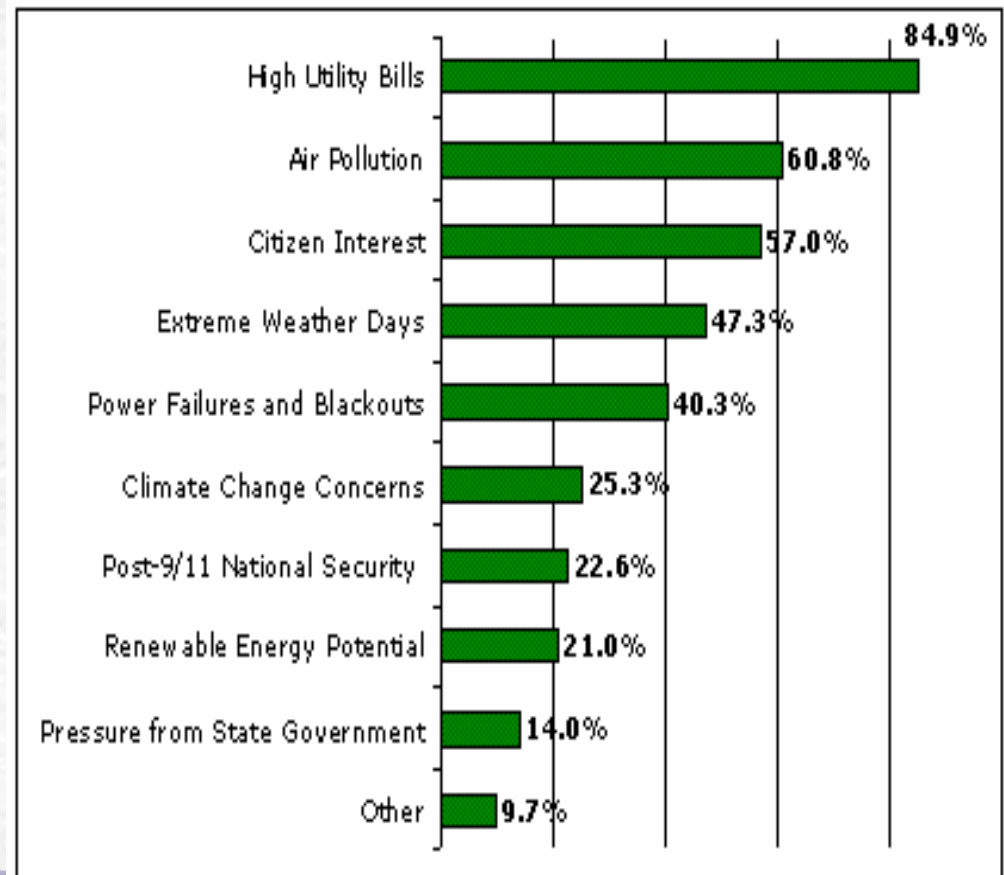
# In What Way is Planning Connected to Energy?

- The following planning issues were ranked as being very connected to energy efficiency and/or renewable energy.



# What is motivating this Concern?

- High utility bills, air pollution and citizen interest top reason communities are interested in energy. **Energy a multi-prong issue.**



# Community Priorities that Directly or Indirectly Relate to Energy

**Highest community priorities that relate to energy:**

1. Reduce sprawl
2. Promote alternative modes of transportation
3. Reduce energy bills

**Moderate priorities cited related to energy:**

- Increase energy efficiency
- Reduce overall energy demand
- Reduce oil consumption
- Reduce dependence on autos
- Incorporate renewable energy options

# Energy Policy Status:

- About 1/3 of communities have an energy use reduction goal with 28% energy policy statement
- Nearly 1/3 of communities have a PM goal; and 29% had an ozone goal
- Nearly 1/3 have policies for public buildings to be energy efficient
- 11% said they have goal to reduce GhG

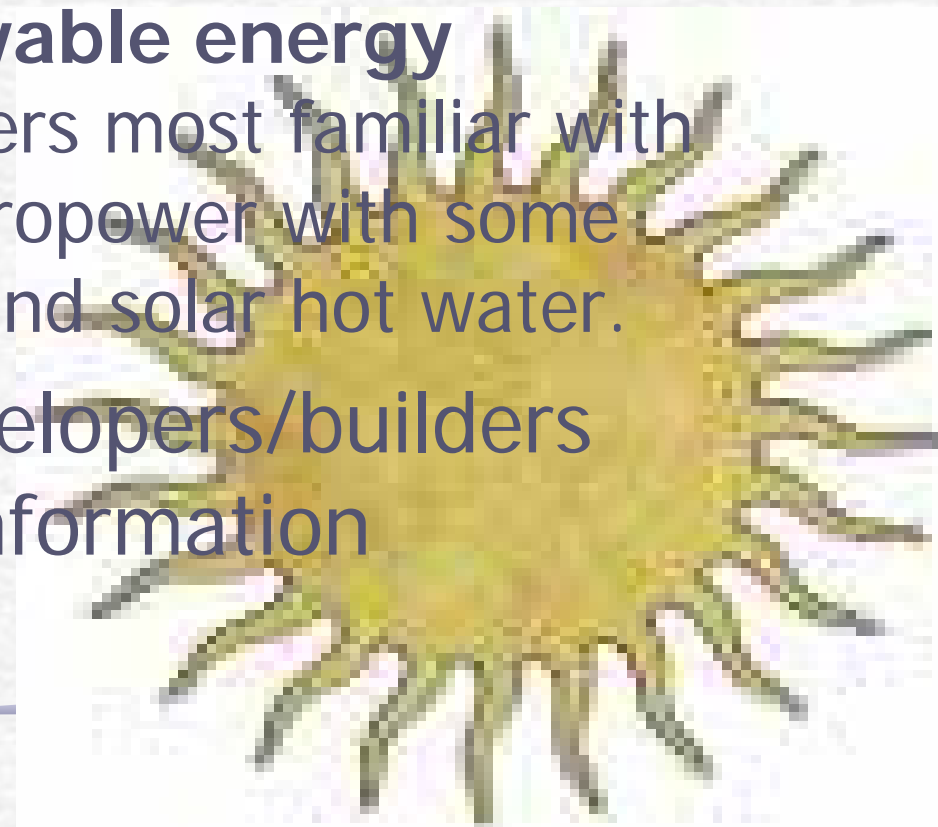
# Energy Policy Goals

## Popular Components:

- Encouraging pedestrian and bicycle travel
- Increasing energy efficiency
- Supporting renewable energy
- Decreasing VMT
- Reducing use of petroleum and fossil fuels
- Some – include energy efficiency in affordable housing.

# Energy Knowledge

- Awareness of renewable energy technologies mixed. Most **only somewhat or not familiar with renewable energy technologies**. Planners most familiar with passive solar and hydropower with some familiarity with wind and solar hot water.
- Nearly 1/2 offer developers/builders energy efficiency information



# Implementation

- 20% have siting standards for power generation and distribution facilities
- **Few** include energy as an element in their comp. plans (20% say will be in updated plans)
- **Few** address renewable energy or efficiency in zoning ordinances, overlay zones, subdivision regulations, solar access requirements, density bonuses

# Survey Conclusions:

- ☛ Energy interest high!
- ☛ Energy knowledge limited.
- ☛ **Energy Implementation low.** Energy more typically addressed indirectly. E.g. nearly 30% have TOD regulations, with 65% of these having at least one built TOD project.



# So, What Next?

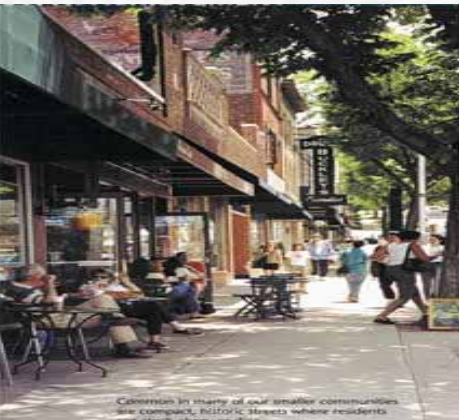
- ☛ **Energy awareness growing...** will only become more important
- ☛ **Planners will need to play increasingly important role.**
- ☛ **Opportunity for integrating energy** efficiency and the cleaner energy resources in *all* aspects of planning.
- ☛ **Need to identify local barriers, opportunities, energy use, renewable resources.**
- ☛ **Planners need information, technical assistance, tools, best practices**

# Potential Benefits

- ☛ Fuel cost savings
- ☛ Cleaner Air
- ☛ Economic development
- ☛ Innovation/Leadership/  
Partnerships
- ☛ Increased livability/comfort/  
security
- ☛ Compliance with voluntary or mandatory  
goals (measure what already doing!)



How can the built environment *help* rather than hinder our energy security goals, the transition to cleaner, alternative sources of power, and future livability?



Common in many of our smaller communities are compact, historic streets where residents





*For more information*

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