

# NABIE 2013 ANNUAL MEETING

## Policy, Politics, and Engineering

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# Ultimate Goal of Engineers

Protect the Health, Safety, and Welfare of the public

We are ethically obligated to do this

This does not restrict us to technical issues

Non-technical issues are also important,  
especially when they have a technical  
component (building codes)

# Can, Should, Will

A politician once said:

**“Engineering** tells you what you *can* do;  
**economics** tells you what you *should* do;  
**politics** tells you what you *will* do.

Technical  
Bureaucrats,  
engineers  
dealing with  
regulations

Where I  
think more  
engineers  
need to be

~~Engineering~~  
Science

“Traditional”  
Engineering

Politics

Economics

# Why The Resistance to Policy?

- Many confuse Politics and Policy
- We have low opinions of politicians
  - But politicians are quasi-engineers
  - They optimize solutions
  - Deal with greater uncertainty
  - We don't like what they decide

# Policy:

A definite course of method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions.

-Webster's Collegiate Dictionary



# Politics:

- a) The art or science of government
- b) The art or science concerned with winning and holding control over a government

-Webster's Collegiate Dictionary

# There is a Difference

Politics and policy are different and both are important to society.

Do we want non-technical politicians making technical policy decisions?

If not, then who?



# Casinos in Mississippi: Policy

- Additional state revenue needed
- Increase budget
- Fund education
- Disproportional tax on the poor?

# Casinos in Mississippi: Politics

- Religious objections
- Re-election concerns
- Balancing multiple interests
- Compromise
  - Only permitted in certain counties
  - Must be on the water (boats/barges)

# Casinos in Mississippi: Engineering

- Move barges during storms to safe harbor
  - How long will that take?
  - Dangers to bridges used for evacuation
- Anchor barges in place and do not move
  - May not have been part of the original design
  - Retrofit required

# Casinos in Mississippi: Katrina





# Casinos in Mississippi: Katrina



# Casinos in Mississippi: Katrina





# Casinos in Mississippi: Katrina



Before



After

# Casinos in Mississippi: Katrina

- 90% of beachfront property destroyed
- Call for new building codes
  - Only 7 of 82 Mississippi counties are covered by the International Residential Code
  - And they have not stayed current
  - Opposition for state-wide adoption

# Casinos in Mississippi: Katrina

- Casinos are now allowed on land
- Building codes are still lacking
- Is this not a matter of protecting the health, safety, and welfare of the public?

# Beachfront Houses: Policy

- Freedom to live where we want
- Attract tourism
- Increase tax revenue
- Evacuation
  - How to implement



# Beachfront Houses: Politics

- Zoning
  - Where can they be built
  - What is the mix of residential and commercial
  - How big can they be
- Building Codes
  - How to implement
- Evacuation
  - When to implement

# Beachfront Houses: Engineering

- Building Codes
  - What to implement
- Evacuation
  - How to design roads



# Beachfront Houses: Sandy



# Beachfront Houses: Sandy





# Beachfront Houses: Sandy



# Beachfront Houses: Sandy





# Beachfront Houses: Sandy



# Codes and Standards

- This is clearly an engineering function
  - But policy and politics play roles too
- The process after a disaster is also critical
  - Permitting is difficult due to increased demand
  - Inspections are not always uniform/consistent
- We must balance quick recovery with health, safety, and welfare issues



# So Where are the Engineers?

- Clearly, we as engineers, have knowledge and skills that could be used to reduce the loss of lives and property resulting from the forces of nature
- Why aren't we?
  - We are not at the right level of government to implement solution
  - We do not have the influence we need

# If Not Us, The Who?

- Politicians?
- Lawyers?
- Scientists?
- All noble callings but are they the right one's for the technical issues we face?

# The US EPA

- Established in December of 1970
- Regulates:
  - Air, Water, Pollution
- Has had 23 Administrators and Acting Administrators since establishment
- Has significant impact on the practice of Engineering

# Who is This?



- Lisa P. Jackson
- EPA Administrator since January 2009
- First engineer ever in the position

# Issues on the Horizon: The Electric Grid

- Critical to the health, safety, and welfare of the public
- Aging rapidly
- Current grid dates to 1960s
  - Local power
  - Less demand for electricity
  - Regulated industry





# Issues on the Horizon: The Electric Grid

- Today the industry partially unregulated
- Significantly higher demand for electricity
- Interconnected
- Heavy reliance on automation and computers
- ASCE gives it a grade of D





# Issues on the Horizon: The Electric Grid

How important is the grid?



# Issues on the Horizon: Energy Policy

- Where is the Energy Policy for the US?
- NSPE Position Statement No. 1756—Energy Security

“NSPE believes that in the near term domestic petroleum could be utilized by reducing regulatory barriers to exploration, production, and refining. Longer term cost increases can be reduced by using North American oil sands and oil shale. Modern technology can reduce costs and environmental impacts.”

# Issues on the Horizon: Disasters

- NSPE Position Statement No. 1753—Disaster Preparedness and Response

“...the professional engineer’s role is to protect public health and safety, free voluntary professional services should be restricted to evaluation and assessment services...following the initial response efforts of first responders.”

“NSPE recommends the development of a National Registry of Volunteers and Professional Engineers that includes individuals who are willing to serve and who possess proven technical, managerial, and logistical experience as secondary responders.”

# Our Professional Image is Important

- Need uniform enforcement of professional registration
- People need to understand what PE means behind our names
- We must change attitudes among some legislators
  - Quality Based Selection (QBS) is not price fixing
  - Are local legislators truly capable of making decisions on design professionals if those services are bid?
    - Do they understand the technical aspects?
    - Can they avoid being captured by the politics?



# Protecting PEs from Liability

## Good Samaritan Law

- NSPE continues to push for this law
- Would protect PEs who help with inspections, for example, following a disaster
- Would not cover negligence or incompetence
- Would allow for quick assistance to get recovery started
- Would not allow current laws to be violated

# What Can You Do?

- Get involved
- Take part in Legislative Days
- Get to know your elected representatives
- Volunteer to serve on local, state, national boards
- Contribute to PACs

# Stay Informed

- Keep up with local/state/national issues
- Sign up for Legislative Alerts
- Excellent information on NSPE website
  - <http://www.nspe.org/IssuesandAdvocacy/index.html>
  - <http://capwiz.com/nspe/home/>

# THANK YOU !