

# **Electricity Issues: A Washington Report**

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A presentation by:

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Washington, D.C.**

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# What Is ELCON?

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- ❑ The national association for large industrial users of electricity in the U.S.
- ❑ Founded in 1976
- ❑ Members from a wide range of industries from traditional manufacturing to high-tech



# Benefits of Membership

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- Education:
  - Workshops for ELCON members
  - Regular Information Memos
  - Technical Committee meetings
  - Legislative updates and bill summaries
- Advocacy:
  - Regular participation on Capitol Hill
  - Testimony on critical issues
  - Representation at NERC, NAESB, NARUC, etc.
- FERC Activities:
  - Interventions – at shared costs
  - Regular meetings with Commissioners and staff
  - Participation in Technical Conferences, etc.
- Networking
- Regular legal updates



# Our Last Workshop Presentations

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- FERC Issues:
  - FERC Commissioner John Norris
- Transmission Pricing:
  - John Flynn – AEP – for “socialization” of costs
  - Bruce Edelston – Coalition for Fair Transmission Policy – for “beneficiary pays”
- Climate Policy:
  - Ken Green – American Enterprise Institute
- Reliability Issues:
  - Joe McClelland, Director of Electric Reliability, FERC
- Reforms in Risk Management:
  - Jeffrey Walker, ACES Power Marketing
- Accommodating High Levels of Variable Generation:
  - Warren Frost – Author of NERC’s Study

# Issues I Plan To Address Today

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- I begin with the standard caveat
  - These are my views – Not necessarily ELCON's
- Issues to address:
  1. Energy efficiency
  2. Renewable resources
  3. Smart Grid
  4. Climate change and the costs of meeting GHG emission requirements
  5. The costs of climate controls
  6. Finally, a few really important FERC issues



# Issue #1: Energy Efficiency

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- The current Administration is a strong advocate of energy efficiency
- Legislation in both the House and Senate would establish EE mandates:
  - Both HR 2454 (The American Clean Energy and Security Act (Waxman/Markey – ACES – passed by the House in June 2009) and S 1462 (the Energy and Natural Resources Committee approved bill) contain such provisions
  - Many states have implemented mandatory EE provisions
  - These provisions usually require electric utilities to implement programs to achieve specified results
- We agree that ***cost effective*** EE should be recognized as a valuable resource
  - But mandatory EE provisions implemented through utilities immediately raise some difficult issues



# Issue #1: Energy Efficiency (Cont.)

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- As CIGFUG members know so well:
  - Industrials are very strong supporters of cost-effective energy efficiency
  - You have to be
  - World-wide competition requires you to implement cost-effective energy efficiency
  - Thus, much of the “low hanging fruit” for industrials has already been implemented
  - Further, since each manufacturing plant is unique, the opportunity for industrials to benefit from utility-implemented energy efficiency programs is limited



# Issue #1: Energy Efficiency (Cont.)

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- Mandatory energy efficiency requirements raise several important issues
  - First, of course, is cost – who pays? Or double pays? Or opts out?
  - The requirements seem based on assertions that EE is very low cost
- Additionally, many utilities and environmentalists assert that utilities have a financial *disincentive* to implement EE
  - Thus, they assert that Commissions should:
    - Modify ratemaking practices to “align utility incentives with the delivery of EE” and
    - Basically, implement so-called “revenue decoupling” (or RD) mechanisms
- A form of RD was included in an early version of the “Stimulus Bill” – and environmentalists and utilities continue to push for implementation

# Issue #1: Energy Efficiency (Cont.)

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- RD supposedly severs the “link” between a utility’s earnings and the volume of its sales
  - It is intended to eliminate a utility’s disincentive to implement energy efficiency and load reduction programs
- ELCON is strongly opposed to RD
  - Although we are strong supporters of energy efficiency as I mentioned earlier
  - Our opposition is more specifically set forth in the ELCON White Paper on RD (available at: <http://www.elcon.org/Documents/Publications/3-1RevenueDecoupling.PDF> )
- Many consumer organizations representing both small and large consumers also are strongly opposed to RD



# Issue #1: Energy Efficiency (Cont.)

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- We oppose RD for at least the following reasons:
  - RD reduces the incentive for consumers to implement EE
  - RD promotes mediocrity in the management of utilities
  - RD increases ratepayers' rates (and probably bills), while creating only minimal and/or questionable net energy savings
  - RD shifts risk from shareholders to ratepayers with only dubious opportunities for net increases in consumer benefits
  - RD creates a basic conflict between the goals and motivations of utilities and the economic interests of a state
    - It eliminates any motivation for the utility to be concerned about the state's economic growth or condition
  - RD results in a complete lack of customer focus



# Issue #1: Energy Efficiency (Cont.)

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- The bottom line:
  - If there is a “climate” or an “energy” bill this year, it probably will contain EE language – more than likely rather stringent language
  - More than likely, it will require utilities to implement EE programs
  - It is likely that these programs will add costs to utility consumers
  - Some states (but not all) allow industrials to “opt out”
    - That might be the best defense



# Issue #2: Renewable Resources

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- Renewable energy usually means wind and solar – but also tidal, geothermal, biomass, some hydro, etc.
  - Renewables may offer tremendous opportunities
    - DOE's National Renewable Energy Laboratory is studying scenarios of up to 80% of our nation's electricity supply to be supplied by renewables
  - And over half of all states have established renewable mandates of some sort
    - Even though it is becoming apparent that some (many?) of the states can't meet the existing standards
- Both HR 2454 and S 1462 propose forms of mandatory renewable energy standards (RES)
  - These standards would require utilities to obtain a specified portion of their power from qualified sources such as wind, solar, geothermal, biomass, landfill gas, and certain hydropower

# Issue #2: Renewable Resources (Cont.)

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- U.S. House:
  - HR 2454 (ACES) establishes a Renewable Electricity Standard (RES):
  - Utilities selling > 4 million MWh must obtain 15% from renewables (as well as 5% energy efficiency) by 2020
  - A Governor can change this ratio to 12% / 8%
  - Distributed generation such as rooftop solar “count” as 3 MW for each MW produced
  - Some (including some Democrats) say not only impracticable, but impossible
- U.S. Senate:
  - S 1462 would establish a 11% RES by 2021 with an additional 4% allowed to be met by EE
  - S 1462 was supported by 4 Republicans



# Issue #2: Renewable Resources (Cont.)

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- The integration of “variable generation” has become a front burner issue for FERC:
  - ELCON submitted comments on the FERC NOPR
  - We are emphasizing, at a minimum, comparability for CHP and DR
- Earlier, 29 Governors:
  - Issued a report calling for a 10% RES by 2012
  - Saying it will stimulate development of technology and create jobs
- Going even further:
  - The Los Angeles mayor, with the support of the head of LADWP, called for rate increases of over 25% to fund renewables
  - He is certainly not alone!
- And, of course, the Administration very recently approved the offshore wind development off MA



# Issue #2: Renewable Resources (Cont.)

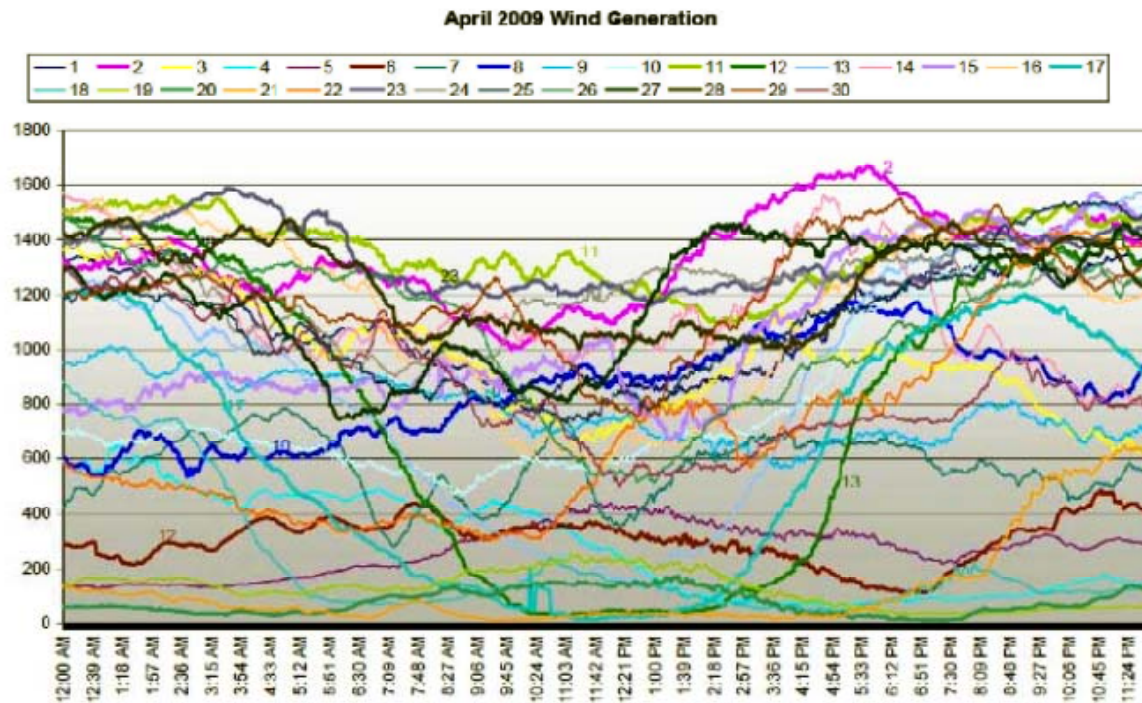
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- Some renewables have characteristics that are significantly different from more traditional generation
  - As an example, the North American Electric Reliability Corporation (NERC) states that wind is:
    - (1) variable, (2) uncertain and (3) often located in remote regions
    - Thus, it requires redundant back-up generation
    - Perhaps significant changes in operating procedures
    - And almost assuredly substantial new transmission



# An Example of Wind Variability: April 2009 Wind in California

Wind Output – a challenge to forecast



# Issue #2: Renewable Resources (Cont.)

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- Finally:
  - There is a growing argument between pro-wind regions (i.e., the midwest) and geographic areas that don't want to pay large amounts to bring the wind to their loads
  - And a growing tension between protecting the environment and the development of wind and solar power
- The bottom line:
  - If there is an energy bill this year, it will probably contain some form of an RES or perhaps a Clean Energy Standard (CES)
    - The big unknown is what will be included? Nuclear? CCS? Natural gas or electric vehicles? What about coal generation? What about offshore drilling (more on this later)?
  - Some renewables can bring significant benefits – but can also bring substantial costs

# Issue #3: Smart Grid

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- We hear a lot about the need for a “smart grid” and the need for new or updated transmission assets
  - Smart grid will do for the electric industry what the internet did for communications
  - President Obama is calling for 26 million homes with smart meters by 2013 and 40 million by 2015
- However, there isn’t even an accepted definition of a smart grid
  - Will we get beta rather than VHS – or HD DVD rather than Blue Ray?
  - Will there be stranded costs?
- We do know that it will be very expensive – literally trillions of dollars – Who will pay?
  - Will it actually bring net benefits to consumers?
    - Advocates of a smart grid assert that it will bring more reliability



# Issue #3: Smart Grid (Cont.)

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- A smart grid is being pushed very hard from the very highest policy levels in our country
  - President Obama has called for a smart grid on many occasions
  - DOE has recently granted \$3.4 billion in stimulus funds to smart grid projects in 49 states
  - FERC seems to think that a smart grid is the solution to the implementation of EE, renewables and DR
- But what groups outside of the government, utilities and vendors are behind the effort?
  - I know of no consumer group that is in support
- The bottom line: A smart (or smarter) grid may bring great benefits, but at perhaps substantial cost
  - If the major consumer “benefit” is real time pricing, there could be substantial backlash
  - And there are significant cyber security concerns

# Issue #4: Climate Change

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- Several legislative proposals intended to reduce GHG emissions were considered in the U.S. Congress in 2009
  - **I emphasize: ELCON has no position on whether or not – or how – GHGs should be controlled**
  - But, if enacted, we would like to see any controls be as efficient as possible and harm manufacturers as little as possible
  - We believe that the cost implications are significant for any of the proposals



# Issue #4: Climate Change (Cont.)

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- The House:
  - Approved H.R. 2454, (ACES), on June 26, 2009 on a vote of 219 - 212
- H.R. 2454 would (among other things):
  - Require caps below 2005 emissions of CO<sub>2</sub>:
    - 3% by 2012; 17% by 2020; 83% by 2050
  - Establish an RES of 20% by 2020 (as mentioned earlier)
    - It is important to note that adding an RES provision to a C & T scheme undermines the efficiency of C & T
  - Address “leakage” through the allocation of allowances to “trade vulnerable industries”
  - Establish a very detailed and complex “cap and trade” system of CO<sub>2</sub> allowances
    - With 85% of the allowances issued at no cost according to a complicated formula in the early years



# Issue #4: Climate Change (Cont.)

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- The Senate has not (yet?) acted, although:
  - The Senate Environment and Public Works Committee reported Sens. Boxer (D-CA) and Kerry's (D-MA) S 1733 (*The Clean Energy Jobs and American Power Act*) in November 2009 with a cap-and-trade provision
  - Sens. Cantwell (D-WA) and Collins (R-ME) proposed a "cap-and-dividend" approach – Recently supported by AARP
  - President Obama continues to encourage Senate action
  - Then there is (was?) KGL .....

# Issue #4: Climate Change (Cont.)

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- Sens. Kerry (D-MA), Graham (R-SC) and Lieberman (I-CT) have supposedly developed a bill (“KGL”) that **MAY** contain:
  - A cap (but no trade) provision for utilities returning ½ of the auction revenue to consumers
    - Utilities begin in 2012 and manufacturers begin in 2016
  - A hard price collar between \$10 - \$30 per ton indexed to inflation
  - A bar for offsets for compliance purposes
  - A “carbon fee” or “linked fee” for transportation fuels
  - Yet other restrictions for industrials
  - Agricultural offsets
  - Perhaps biofuel incentives
  - Renewable electricity and energy efficiency standards
  - “Bonus allowances” for early coal retirements
  - Incentives for nuclear, CCS, and off-shore drilling



# Issue #4: Current Status of Climate Change ? (Cont.)

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- Status of KGL and other climate/efficiency legislation:
  - Eight Democratic Senators wrote KGL saying that the proposal did not achieve sufficient emission reductions from the transmission sector
  - Senator Graham dropped support for the KGL proposal over controversy regarding priorities (immigration vs. climate) – but financial reform and budget issues will postpone any debate
  - However, a “bill description” of the KGL proposal (still not released) has been sent to the EPA for a cost review – keeping the bill at least somewhat active
  - There are still “unresolved issues” within KGL such as:
    - Allocation of royalty revenues from offshore oil and gas drilling
    - Border adjustment language for competitive issues
    - Preemption of state initiatives
  - Energy security vs. a green economy is another tension – and expired and expiring tax programs may not be enough to smooth the tensions

# Issue #4: Current Status of Climate Change ? (Cont.)

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- The oil leak from the Horizon rig catastrophe is a REALLY BIG unknown:
  - Even before the leak, 10 lawmakers wrote a letter raising concerns about inclusion of additional offshore drilling language in climate and energy legislation
  - Following the leak, several Democrats have stated that they will not support any additional offshore exploration or drilling
  - However, Senate Majority Leader Reid (D-NV) said that the spill should spur, rather than slow, comprehensive energy legislation
  - And Senator Lieberman (I-CT) on May 4<sup>th</sup> said that climate and energy legislation will still contain drilling provisions – but with restrictions such as drilling cannot be closer than 75 miles from shore

# Issue #4: Current Status of Climate Change ? (Cont.)

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- Further considerations
  - As just mentioned, the oil spill has caused great concern over offshore drilling
  - While the coal mining disaster has fueled concerns over coal
  - Nuclear remains very costly
  - And the implementation of large quantities of “variable resources” causes real operational and reliability problems
- But without these, is there a “deal”?
  - Or, will Congress just enact energy efficiency mandates and an RES/RPS?
  - Can/will energy efficiency and renewables fill the gap?
  - And, even if so, at what price?

# Issue #4: Current Status of Climate Change ? (Cont.)

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- Several high level questions recently have been raised, perhaps slowing the movement including:
  - What will be the impact of the increasing recognition that compliance will result in significant income redistribution?
  - What are the impacts of "Climate Gate"? (The data and document leaks at East Anglia in November 2009 questioning the science of climate change)?
  - Was Copenhagen a success or a failure? Are signatories meeting their commitments?
  - Have we seen the end of the IPCC's admission in January 2010 that glacier melting predictions were not based on sound data?
  - What will be the Congressional reaction to things like the Gallup poll recently releasing a poll showing that among 8 different environmental problems, "global warming" was 8<sup>th</sup> in importance?

# Issue #4: Current Status of Climate Change ? (Cont.)

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- However:
  - EPA continues to move ahead developing CO<sub>2</sub> regulations under the Clean Air Act – saying that they are **REQUIRED** by the CAA to control GHGs
  - EPA's strict new limits on coal-fired power plants' NO<sub>x</sub>, SO<sub>2</sub> and mercury emissions may be so expensive that they could force older coal plants to shut down prematurely
- Although opposition to EPA's actions continues to grow including Sen. Murkowski's (R-AK) resolution (SJ Res 26) with roughly 100 supporting organizations and Sen. Rockefeller's bill (S 3072)

# Options?

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- What will we actually get?
  - The EPA is moving ahead after an “endangerment finding” to regulate GHGs – But their actions are being challenged in court
- Will there be legislation?
  - A GHG reductions bill (cap-and-trade or otherwise)?
  - A cap-and-trade bill for some sectors and a fee/tax for others?
  - Or perhaps a “clean energy” bill?
  - Or perhaps a “jobs” bill that has significant energy provisions?
  - Just a bill to stop EPA?
- And finally:
  - How hard will President Obama push?
  - And for what? And when?

# Issue #5: The Cost of Meeting GHG Controls

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- The estimated costs of GHG controls vary substantially
  - An EPA study of the May 15<sup>th</sup> version of Waxman-Markey finds that
    - "...for the duration of the policy, average annual household consumption is estimated to decline in a range of \$98 to \$140 dollars per year relative to reference scenario."\*
  - EPA asserts that the version that actually passed the House would be even less expensive
    - Primarily because many allocations are given away without cost

\* EPA Preliminary Analysis of the Waxman-Markey Discussion Draft, The American Clean Energy and Security Act of 2009 in the 111<sup>th</sup> Congress, 4/20/09, slide #4, Emphasis Added.

# Issue #5: The Cost of Meeting GHG Controls (Cont.)

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- Further, McKinsey & Company found that:
  - We can achieve a 70% CO<sub>2</sub> reduction worldwide by 2030 at a cost of less than 1% of GDP with no lifestyle changes for anyone
  - However, achieving this result requires by 2030 (a few examples only):
    - 42 million hybrid vehicles – 40% of all sales
    - Avoiding deforestation of 170 million hectares
    - Planting 330 million hectares of new forests
    - 90% of all forestry opportunities are in developing countries
    - 70% of global electricity from low-carbon generation

# Issue #5: The Cost of Meeting GHG Controls (Cont.)

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- However, the Heritage Foundation released a study concluding that the final version of Waxman-Markey would:
  - Reduce GDP by \$9.6 trillion
  - Destroy 1,105,000 jobs
  - Raise electricity rates 90% after adjusting for inflation
  - Raise gasoline prices by 74% after adjusting for inflation
  - Raise residential natural gas prices by 55%
  - Raise an average family's annual energy bill by \$1,500, and
  - Increase inflation-adjusted federal debt by 26% -- or \$29,150 per person

# Issue #5: The Cost of Meeting GHG Controls (Cont.)

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- And in late May, CRA International released a study conducted for the National Black Chamber of Commerce finding that the May 15<sup>th</sup> draft version of Waxman-Markey would, by 2030:
  - Reduce national GDP by roughly \$350 billion per year,
  - Cut net employment by 2.3 to 2.7 million jobs each year between 2012 and 2030, even after accounting for new “green” jobs,
  - Reduce earnings for the average U.S. worker by \$390 per year, and
  - Reduce an average household’s annual purchasing power by \$830 per year

# Issue #5: The Cost of Meeting GHG Controls (Cont.)

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- Finally, Steven Hayward of the American Enterprise Institute wrote an op-ed for the *WSJ* with a few thoughts that, if correct, put climate control costs into perspective including:
  - DOE says that in 2006 the US emitted 5.8 billion metric tons (bmt) of CO<sub>2</sub> or just under 20 tons per capita
    - An 80% reduction from 1990 levels means the US cannot emit more than 1 bmt of CO<sub>2</sub> in 2050
    - The last time the US emitted 1 bmt was around 1910 when the population was 92 million
  - By 2050, the Census Bureau projects population to be 420 million
    - Thus, per capita emissions must be 2.5 tons per capita
    - France and Switzerland (with electricity from nuclear and hydro respectively) emit about 6.5 tons per capita today
  - The average US residence uses about 10,500 kWh and emits 11.4 tons of CO<sub>2</sub> per year
    - This must fall to 2,500 kWh and 1.5 tons to meet the 2050 goal
- And climatologists estimate that meeting the cap will lower global temperatures by no more than 0.2 of a degree at the end of the century

# What Do The Proposed Energy Policies Mean For Consumers?

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- The proposed energy and environmental policy changes:
  - May well result in very substantial increases in electricity prices
  - The level of cost increases depends on variables such as the:
    - Auction or allocation of allowances, availability of offsets, inclusion of biomass, the available supplies of natural gas, involvement of either new or existing hydro and nuclear facilities, treatment of “leakage,” the size of the RES (or RPS), etc.
    - Not to mention the general level of the economy
- In any event, electricity price increases can have very significant impacts on basic industry
  - Substantial portions of industry production may be shifted offshore to regions with lower electricity prices and lower (or no) similar energy and environmental policies
    - Resulting in significant losses of manufacturing jobs in the US

# Won't Green Jobs Offset The Other Losses?

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- The Administration projects that 5 million “green jobs” will be created over 10 years
  - Vice President Joe Biden said last March
    - These are “jobs associated with environmental improvements and improving the lives of the American People”
    - “Scientists working on an advanced renewable alternative to CO<sub>2</sub>-producing fossil fuels is engaged in a green job, as is a laborer winterizing or weatherizing a home, or a lineman or a linewoman building out the smart grid – they’re all green jobs.”
- The stimulus package contained \$20 billion devoted to “green” investment
- And nearly every proposed energy efficiency or climate bill is accompanied by claims that it will create millions of green jobs



# Won't Green Jobs Offset The Other Losses? (Cont.)

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- However, others question such assertions
  - Even the ***Washington Post*** on April 19, 2009 (reporting on a report from GoodJobs First) said:
    - It is not uncommon for green job wages to be as little as \$8.25/hour
    - And even if the government's claim regarding the creation of new green jobs is correct, the ***Post*** notes "it may inadvertently precipitate the declining stature of the nation's manufacturing and union base."

# Won't Green Jobs Offset The Other Losses? (Cont.)

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- And a study directed by Dr. Gabriel Calzada, an economics professor at King Juan Carlos University in Madrid, concluded
  - That every “green job” created in Spain resulted in 2.2 other jobs being destroyed
  - Only 1 of 10 “green jobs” are permanent
    - With 2/3 in construction, fabrication and installation and ¼ administrative, marketing and projects engineering
  - Spain spent €571,138 to create each “green job”
- Certainly some have questioned some of the results of this study\*
  - However, questions regarding the benefits of any trade-off between manufacturing and “green” jobs are growing

\* See for example *The Wall Street Journal*, March 30, 2009



# And If All Of This Is Not Enough – There Are *BIG* FERC Issues

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- Transmission:
  - Planning -- regional or interconnection wide?
  - Cost allocation of transmission expenses – literally trillions of dollars are at stake
- ISO/RTOs:
  - Do their “compliance filings” show net benefits to consumers?
  - Will FERC require metrics to measure their performance?
- Demand Response:
  - Who will be allowed to participate?
  - And how much will they get paid? This is a really big issue!
- FERC oversight of NERC:
  - Are you on the NERC “Registry”?
  - If so, you will care a whole lot about NERC
- CHP:
  - After over 30 years, there are still serious and continuing concerns



# Conclusions

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- The U.S. faces a difficult and uncertain electricity future:
  - There certainly is a potential for more energy efficiency and renewables, but they must be cost effective or they will cause more harm than good
  - Cost effective energy efficiency, renewables, smart grid, and GHG reductions may have a place in the new electricity future
    - But extreme care must be taken to be sure that captive ratepayers are not required to pay lots of money for questionable (at best) results and
    - The negative impacts on the U.S. economy may be great
  - Finally, whether Congress actually takes action or not, FERC is taking all sorts of actions that can cost you plenty
- Are you involved enough?
  - Doing nothing is not enough to protect yourself



## To Contact ELCON

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