

1 **Testimony of Georgia Public Service Commissioner Stan Wise before the**
2 **House Subcommittee on Energy and the Environment**
3 **Hearing on Renewable Energy**
4 **February 26, 2009**
5

6 Good Morning. I am honored to have the opportunity to appear before this
7 distinguished Committee today to present testimony before you as you wrestle with this
8 difficult issue.

9 My name is Stan Wise. I am a publicly elected Commissioner of the Georgia
10 Public Service Commission. As a regulator, I am responsible for ensuring that retail
11 electricity customers receive safe, reasonably priced, reliable electric service. I am
12 concerned that a “one size fits all” federal Renewable Portfolio Standard (RPS) mandate
13 fails to recognize that there are significant differences among the states and regions in
14 terms of available and cost-effective renewable energy resources, and that having such a
15 standard in energy legislation will ultimately increase consumers’ electricity bills.

16 We should be discussing ways to promote clean energy of all types. We need to
17 develop and deploy all energy sources that can ensure an adequate supply of energy in
18 the future, that can power our economy and that moves us toward improving our
19 environment, especially in ways that reduce greenhouse gases. Major energy sources that
20 can meet those needs include nuclear, coal with carbon capture and sequestration, natural
21 gas, energy efficiency as well as wind, solar, biomass and geothermal. The distribution
22 of these energy sources is different across the country. Some regions have more nuclear
23 power, some have more coal and others have more wind or solar opportunities. We
24 should be encouraging states and regions to take advantage of those sources that can best

1 advance our energy and environmental goals with the understanding that the exact use of
2 sources will be different in each state or region.

3 On the other hand, establishing a uniform national RPS focused exclusively on a
4 limited number of sources like wind, solar, biomass or geothermal, without regard to
5 crucial regional differences, will unnecessarily drive up electricity costs, jeopardize
6 reliability, and divert capital that will be needed to achieve other objectives like meeting
7 aggressive carbon targets.

8 My state of Georgia for example does not possess an abundance of what is
9 defined as renewable in many legislative proposals. According to Department of Energy
10 data Georgia does not have abundant solar energy that is available to states in the Desert
11 Southwest, the wind turbine generation available to states located in the Great Plains nor
12 abundant geothermal. As a result, my state, and our region, must seek to encourage the
13 growth of research and development in the use of energy resources that are available and
14 economically viable to provide for our future needs. This will include the development of
15 coal with carbon capture and sequestration, nuclear power, natural gas, energy efficiency
16 and what renewable fuels that we might have. There is renewable development occurring
17 in Georgia. For example, Georgia Power Company has worked to utilize landfill
18 methane for power generation. They are also repowering a small coal fired power plant
19 in South Georgia to use biomass for generation. Also, they are working with Georgia
20 Tech to examine what wind resources might be available offshore. But we have to
21 understand that all of these renewable resources together can't come close to meeting the
22 extremely high levels of requirements in legislative proposals. During the earlier years
23 covered in these legislative proposals we will have to continue our reliance on

1 conventional base load generation sources including new nuclear energy to ensure that
2 reliable, reasonably priced, electricity is available to all of our citizens.

3 Some regions of the country have access to wind resources. Wind can be a ready
4 resource but it has limitations. Its availability is severely limited and can not be
5 dispatched by utility operators when load demand peaks. A recent study entitled the
6 “Joint Coordinated System Plan” prepared by several regional transmission planning
7 organizations and TVA shows that in the eastern U.S. when electric demand is at peak
8 load wind is only available 30% of the time. The report goes on to conclude that the gap
9 between that 30% and meeting 100% of the demand will have be filled by building
10 natural gas fired generating capacity.

11 The report also shows that if the eastern U.S. were to meet 20% of its energy
12 requirements with wind that 229,000 megawatts of wind capacity would have to be built.
13 (A large windmill is about 2 megawatts so that would require the installation of 115,000
14 windmills.) These 229,000 megawatts of wind would require over 67,200 megawatts of
15 natural gas fired capacity to provide back up energy when the wind is not blowing.

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17 Some are discussing building transmission lines from areas with wind resources
18 (primarily in the west) to the eastern U.S. These proposals raise concerns about cost and
19 reliability, additionally transmission doesn't solve the intermittent nature of wind
20 resources.

21 Solar power has a capacity factor even lower than wind. Humidity and cloud
22 cover make solar power a very unlikely source for substantial production in Georgia and
23 the southeast. Its cost is also extremely high even when considering federal production

1 tax credits. With a capacity factor as low as 20-25% in the southeast solar will also have
2 to be backed up with fossil fuels most likely natural gas.

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4 One renewable resource that we do have in Georgia and the southeast is biomass.
5 We have for years supported a pulp and paper industry that has provided thousands of
6 jobs and products that have grown our regional economy. We also have a timber industry
7 that provides wood products for housing. But new demands are stressing the ability of
8 biomass to meet the needs that we are putting on the resource. One example is the
9 federal mandate for the production of ethanol. Of the current federal mandate some 22
10 billion gallons a year are supposed to come from cellulosic sources which mean trees and
11 other wood resources. Numerous ethanol plants are locating in the southeast and they
12 will be in the market for biomass resources.

13 Some have said that utilities in the southeast can meet an RPS with biomass but I
14 believe that people with that opinion dramatically underestimate the amount of fuel
15 required to generate 20% of retails sales. For example if Georgia Power were to meet its
16 20% requirement with biomass it would require some 2,300 megawatts of generating
17 capacity. Recall that they are currently repowering a coal plant with biomass that will
18 generate only 100 megawatts and this will be one of the largest biomass to electricity
19 plants in the country! These 2,300 megawatts of capacity would need a sustainable forest
20 of almost 4 million acres to be able to harvest enough biomass on an annual basis to meet
21 the federal requirement. This would equal the land area of eleven counties in Georgia.
22 Now layer on top of that demand the needs for cellulosic ethanol production and our pulp

1 and paper industry and I think most would agree that it is not possible to meet these large
2 federal mandate with biomass.

3 So what are the options available for utilities to comply with a federal RPS? If
4 renewable resources are not available at adequate levels in the state or region where the
5 utility operates they can either purchase Renewable Energy Certificates (REC's) or pay
6 an Alternative Compliance Payment (ACP) to the federal government. If buying REC's
7 then ratepayers are buying a piece of paper that would come from a renewable resource
8 somewhere outside the state. They are getting neither the renewable facility nor the
9 electricity. If, on the other hand the ratepayers have to comply by making the ACP to the
10 federal government then they essentially will be paying a tax. Again they get neither a
11 renewable facility nor any energy.

12 In both of these situations, because of the limited amount of renewable resources,
13 enormous amounts of money will flow from ratepayers in Georgia and the southeast to
14 developers or utilities in other parts of the country or to Washington, D.C. Literally
15 billions of dollars will flow from our ratepayers in this manner. This money from our
16 ratepayer's pockets won't be available to invest in or develop truly clean energy in
17 Georgia or the Southeast region that will be needed to meet future demands and
18 effectively limit greenhouse gas emissions.

19 Even with these challenges if it is still the desire of the Congress to impose this
20 federal mandate then certain considerations should be taken into account. They are:

- 21 • States should be allowed to develop renewable or clean energy standards
22 that take into account the resources available in the state or region. This

1 will ensure state to state equity while maximizing the benefits of
2 expanding clean energy.

3 • Targets and timetables should be practical and allow state or regional
4 variations depending on the resources available.

5 • The definition of qualifying resources that would count toward
6 compliance with a federal standard should be expanded from the list in
7 current proposals. In this regard:

8 ○ Existing hydro should count towards compliance the same as
9 existing wind and solar.

10 ○ Nuclear generation should be included due to the fact that it emits
11 no carbon.

12 ○ The definition of biomass should be expanded to include all
13 recoverable wood material. This would include whole trees which
14 are currently excluded from credit towards compliance.

15 ○ Energy efficiency should be included as a resource that would
16 count towards compliance. This is a resource that is being
17 expanded in Georgia and the southeast and its use should not be
18 limited in any federal standard.

19 ○ Utilizing municipal solid waste for energy production should be
20 included towards compliance. This is a renewable resource that is
21 available across the country and its use will reduce other
22 environmental impacts from its disposal.

1 Finally if there are Alternative Compliance Payment provisions then payments
2 under such a program should remain in the state where the utility ratepayer
3 resides. This money should be available for energy investments and programs
4 closest to and that will have the best chance of benefiting the ratepayer who will
5 be paying the cost.

6 I understand and support the desire to expand renewable and clean energy. But we have
7 to do it in a way that meets multiple goals. These goals are maintaining reliability,
8 ensuring affordability and an adequate supply to meet the needs of our economy and our
9 citizens and at the same time protecting our environment, including reducing greenhouse
10 gas emissions. It is a balancing act. I am an elected representative like all of you on the
11 panel and face these challenges every day. I know we can solve these challenges and I
12 look forward to working with you in the future.

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