



**Sharon Grierson MP  
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### **Sustainable Energy**

**MS GRIERSON** (Newcastle) (5.37 p.m.)—Recently I spent two weeks in the United States of America studying developments in solar energy and clean coal technologies. I did so as the member for Newcastle, understanding that sustainable energy and our regional economy are intertwined. In fact it is my belief that the Newcastle/Hunter/Central Coast region has a major part to play in the sustainable energy future of this nation. Newcastle is the largest exporter of coal, by volume, of any port in the world and is the regional centre for energy producers, with many coal fired power stations feeding into the state and national electricity grid. Undeniably, our region has a carbon dependent economy and could easily be seen as part of the climate change problem. As asserted in CSIRO's report into climate change, *The heat is on*, regions such as ours stand to lose the most from the climate change agenda. That is of course unless we seize the opportunities that come from being an energy centre for the nation and become a region of sustainable energy solutions.

Fortunately, Newcastle also has a rich heritage of industrial skill and innovation and world-class research institutions. The CSIRO national energy flagship and energy divisions are both located in Newcastle and are leaders in sustainable energy research across diverse areas, but particularly in clean coal and solar thermal technologies. Newcastle University has collaborative research underway into clean coal and geothermal energy and remains a leading university in the engineering that underpins our knowledge based manufacturing capacity. In fact we are well placed to link into the global research and enterprise networks that are currently working overtime to find sustainable energy solutions. CSIRO's James McGregor said recently:

"We have all of the right conditions to set Newcastle up as the next Silicon Valley of the sustainable energy industry."

I agree with him.

Whilst in the US, I visited Silicon Valley in California to study firsthand how that region is building on its existing high-tech, knowledge based industries to create new opportunities in sustainable energy, attracting billions of dollars of investment in the process. Silicon Valley offers an exciting example, with its

array of sustainable energy projects and its world-leading commercial Electric Power Research Institute, EPRI, providing technological and research support to the electricity industry. Its critical mass of research and commercial activity, all in synergy with the strengths of its region, offers low risk for investors, so projects and investment dollars are flowing.

At Silicon Valley I met with Australian researcher and businessman David Mills, who took his expertise and potential commercial gain to Silicon Valley, from Australia, and formed his company AUSRA. Located close to Stanford University, and backed by one of America's leading venture capitalists, AUSRA is proposing solar thermal energy as the solution for the US national grid. David's original solar project is still in operation at Liddell power station in the Hunter Valley.

In America I also met with the National Renewable Energy Laboratory, NREL, the US equivalent of CSIRO's national energy flagship, to learn of their approaches to photovoltaic and solar thermal energy research. I visited Nevada Solar One in the Mojave Desert, the world's third largest solar power plant. This exciting project had only been operating for a month and was contributing solar energy into the electricity grid. Its capacity of 60 to 75 megawatts, although far smaller than the average commercial power station, is a significant contribution to the state power grid. Solar One aims to eventually progress into solar energy storage at their site, but clearly getting started and gaining a commercial return is a necessary precursor to continuing research and development.

I also had briefings from FutureGen, the international alliance tasked with building the first commercial-scale clean coal power station with carbon capture and storage technology. Interestingly, although Australia is not a member of this important alliance, it was stressed by FutureGen that a similar venture by Australia to build a commercial-scale clean coal power station, such as projects like ZeroGen, would be a very welcome initiative to add to the scientific research. A critical mass of international research could save money, obstacles and stumbles in research and precious time in this important sustainable energy endeavour.

I therefore take this opportunity to commend the House of Representatives Standing Committee on Science and Innovation for their report, released today, *Between a rock and a hard place: the science of geosequestration*, advocating additional funding to CSIRO to assess the storage potential for CO geosequestration in New South Wales and recommending funding for at least one major large-scale plant to demonstrate the operation and integration of carbon capture and storage. This is very much in line with the view of FutureGen expressed to me in the US, and also reflects the current policy of the federal opposition and the Labor government in New South Wales.

Policy discussions with the United States Department of Energy in Washington revealed some recent major injections of funds into sustainable

energy projects, and the presentations on geothermal, energy efficiency, solar energy and solar thermal technologies showed much overlap with research and developments in Australia. But although the current US Department of Energy initiatives are supporting research and industry projects to find sustainable energy solutions, similar to the Australian experience under the Howard government the federal policy delay has brought about a situation where state governments have taken the sustainable energy policy initiative putting in place both incentives and targets. Unfortunately, the diversity of state approaches, with states like California having particularly aggressive policy whilst other states have very little policy at all, reinforced the importance of federal leadership for advancing investment and research in this vitally important economic area.

Talks with the Division for Sustainable Development at the United Nations reinforced the need for climate change leadership by developed nations such as Australia and the imperative to mentor and support our developing neighbours. A debate on climate change had just concluded in the United Nations, and the division noted that the number of countries that spoke in this debate far exceeded all expectations. The work of the Intergovernmental Panel on Climate Change was discussed and recent developments shared.

The IPCC's report highlights just how great a challenge we face. But to meet this challenge we cannot rely on simplistic solutions proposed by extremists on either side of this debate. We cannot stop exporting coal or close down the coalmining industry, nor can we risk John Howard's nuclear option. We need to learn what is working around the world and use this knowledge to explore the full range of sustainable energy options. As Newcastle's federal representative, forging links, promoting the achievements of our region and tapping into global opportunities is an important part of my role. I believe Newcastle can replicate the Silicon Valley success story. But getting the sustainable energy policy settings right, so that our talent and investment opportunities do not disappear to other states or offshore, is of critical importance so that Newcastle can be a successful hub of global sustainable energy networks.

Within the framework of supporting a range of sustainable energy technologies, Labor's commitment to setting emissions targets to aid industry certainty, our promise of an additional \$50 million to create an Australian solar institute at CSIRO in Newcastle and our \$500 million national clean coal fund all place the Newcastle region at the forefront of opportunity. We do need to aggressively promote globally the attributes of regions such as Newcastle to attract sustainable energy investments.

That is why I initiated and hosted two meetings this year with our coal companies, researchers, energy generators, unions and business and industry groups to discuss setting up a sustainable energy research council in the Hunter. Such a collaborative body could facilitate building a critical mass of industry and research activity and assist in transforming our regional and

national economies from carbon-dependent ones to ones that are based on sustainable energy—both from clean coal and renewables. Sustainable energy is after all the economic currency of the 21st century. To sustain our regional economy we need to optimise our global presence in this field.

I wish to acknowledge the work of CSIRO's energy flagship and division in Newcastle. Their work was well known and highly regarded in the US. Importantly, without their credibility and their assistance I would not have been able to make contact with so many eminent researchers, businesses and policy leaders in the United States of America. I particularly thank Dr John Wright, Dr David Brockway, Wes Stein and their colleagues for their inspiration, patience and support in making sure that their local member of federal parliament understands the challenges of climate change and is an informed advocate for sustainable energy research, technology and policy development. I do wish to register here my gratitude for the many people I met with in America who were so generous with their knowledge, intellect and time. They were inspiring and particularly good global citizens. Time precludes me from naming them here but my report, which will be tabled within the next month, will include my sincere gratitude for their valued contributions.

In conclusion, the last 11 years under this government have been a wasted and a lost opportunity in positioning Australia at the forefront of sustainable energy research. It is important for government to provide leadership if our businesses and our investors are to take seriously the opportunities that present themselves. Those opportunities are abundant in my region. I recommend that policy setters look at the potential for Newcastle as a hub for sustainable energy development, given its lengthy involvement in energy and energy research.