When it comes to our need for electricity, reliability is essential.

As we come to the end of another year, it is not a nuclear issue that I want to discuss but rather the broader issue of our need for reliable electricity. Last month I started with a quote from the IEA's World Energy Outlook 2013 highlighting how important energy has become to our society – affecting the economics of nations and our environment as well as our daily way of life.

Over this holiday season in North America the importance of electricity to our very survival has become more evident. On the Friday before Christmas the northeast United States and Canada were hit with a massive ice storm. Hundreds of thousands of people lost power. The cause was primarily due to power lines being affected both directly by intense icing as well as by debris from trees and other items that fell onto the lines as they became heavy with ice causing the lines to fall.

And here we are days after Christmas and while most households have had their power restored (many after more than 5 days without), thousands continue to wait. This is different from other extreme weather events such as hurricanes that have been responsible for mass destruction of homes and infrastructure. This ice storm, while also an extreme weather event, has only caused power loss as its lasting effect. The result is we are able to specifically see the importance of electricity to our modern societies.

So what is the impact of a prolonged loss of electricity? Frankly it is very difficult for those without – especially for those most vulnerable – the elderly, the sick and those without friends or family nearby to take them in.

Living a large city in a cold climate, just imagine your home without heat in subfreezing weather, no power for the refrigerator or freezer (although outdoors can work), no water to flush the toilet or bathe or even more importantly drink; and you have the makings of a catastrophe – people freezing

and hungry without the basics required for survival. And to make matters worse it is over the holiday season when most had plans to be with family. In some cases large family holiday meals were no longer possible as the emphasis was on finding ways to stay warm. The added downside of the season is that on Christmas almost everything is closed, no supermarkets, very few restaurants; no services of any type.

On the positive side, the number of people without power is now in the minority so there are many options for them to seek help and get warm. But others continue to struggle. The news has recently reported on police and fire departments having to visit large apartment buildings and take elderly sick residents down numerous flights of stairs to safety. These people have been stuck in their cold apartments for days without food or water. With no one to check on them, their lives were at risk.

As stated earlier, the cause of this mayhem is related to the transmission and distribution system failing in the weather, not generation. But the point to be made is that without electricity in our cities; it would only take days until the population would need to find ways to feed and warm themselves on mass.

So it is pretty obvious that we need to have reliable electricity supply to keep society working. And reliable supply means robust generation and distribution. Our aging infrastructure can no longer be left to decay further so that with every extreme weather event, we take days or weeks to recover. After the major blackout in the North American northeast a decade ago, the focus was on ensuring system reliability. The rules changed and all North American utilities now adhere to these rules, making our system better. But here we are a decade later and the issue has changed. It is no longer about reliability in general, but the ability to withstand extreme weather events. And most of all our ability to recover when the system is damaged during

such events.

And of course we have the issues associated with individuals that oppose what is necessary to keep our system running. For example, power lines have fallen when tree branches have damaged them. While simple measures like pruning may be the cost-effective way to protect power lines, it can carry a public-relations price. As stated by the CEO of Toronto Hydro "You can imagine … our arborists show up on the curb and knock on the door and say 'We're here to cut your branches down.' They're not necessarily a welcome news," he said. "So it's really finding that right balance." This shows that no matter what the issue, there are always those opposed (as with those opposed to nuclear power); but these are also usually the first to complain when they lose power and need their lines restored.

So while this is not directly about generation or nuclear power, it is important to remind ourselves of the importance of reliable supply as we continue the debate on how we want to generate our electricity going forward. Robust, reliable baseload electricity is important. And this is where nuclear power plays a very important role. We also talk about economics and environment. Both essential – so how can we meet the challenge of having reliable, economic and environmentally benign electricity?

As we prepare to enter a new year, let's remember that fossil fuels like coal and gas are reliable, can be economic, but impact our environment. Renewable sources like wind and solar are good for the environment but can be costly and unreliable. Nuclear Power is an important source of electricity that can provide large amounts of clean, reliable and economic electricity to keep our society moving.

I hope that all power is restored to those without as soon as possible so they can enjoy what is left of the holiday season.

Wishing you all a very happy and healthy 2014