

# Kingdom Report

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## Kingdom Energy Policy: Poverty, Population and Prosperity

The Kingdom of God on earth must have an energy policy. "You shall receive power" is not only needed for spiritual growth but increasing energy is vital for prosperity and family growth. Here some guidelines....

Last week I gave you an article on Dr. Koonin's conclusions as a physicist that he cannot trust the climate "existential threat" because as an expert in complex computer modeling he considers all climate models that project into the future to be fatally flawed.

I am continuing this series. Not only are the computer models flawed in their projections, the assumptions about the solutions to carbon emissions are totally flawed. I am speaking here of the renewable energy solutions being pushed.

Why am I getting involved in this issue? Because I suspect that there is another agenda here that is not being admitted publicly. I will do more on that in a future blog but whenever you see references to the "Great Reset" place a big question mark there.

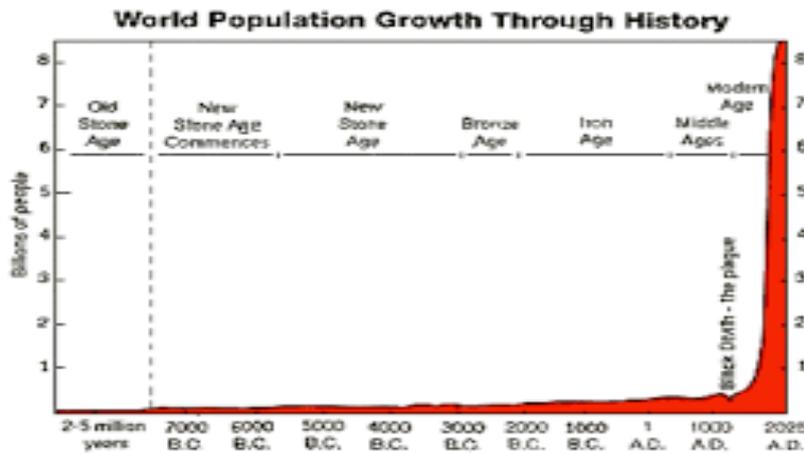
Poverty is a Kingdom issue. Jesus came with a message of "good news to the poor". And it is not just a message of salvation. Poverty is a curse. God has provided us with abundance for all we need to not only provide for the care of the poor but also to care for the earth. As evangelicals we are not part of the debate. Because we have basically abandoned the earth to the enemy with our sole concentration on heaven and getting people to heaven.

But there would be no people to get to heaven if we did not have population growth and family growth. And we could not support the mission work of the church if we did not produce wealth and surplus resources that we can divert from our own needs to be able to give abundantly to the needs of the ministry of the church.

That requires prosperity. Now here is the most important input required for growth, for prosperity for increasing population.....that important input is ever increasing supplies of energy!

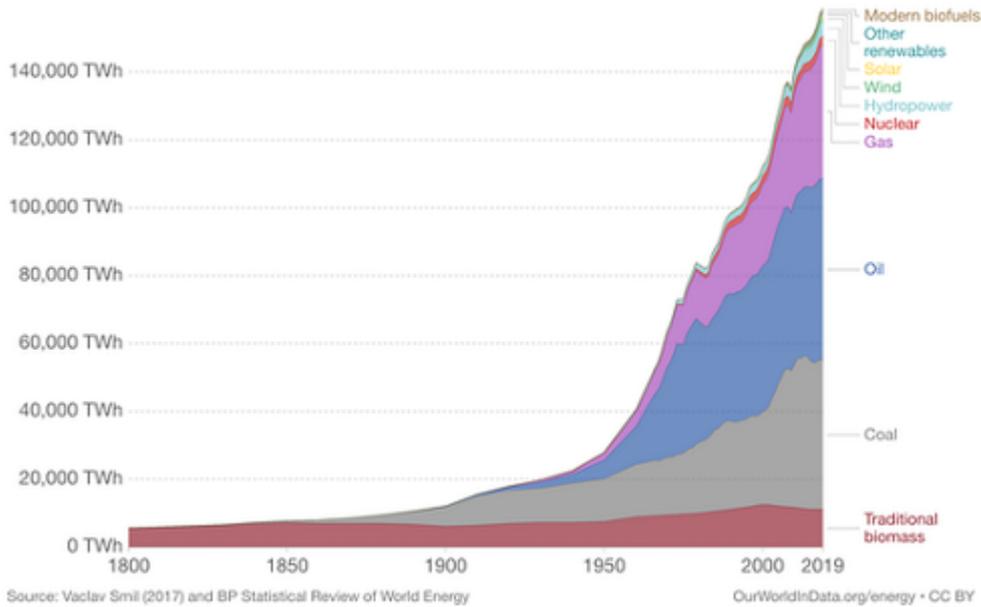
There is a direct empirical connection between more energy supply in an economy and more economic growth and more population growth. When energy supplies dry up, economies die, populations die, diseases spread, people go hungry.

Below I give you two historical charts. The dramatic rise in population over the last 200 years with hardly any population growth for thousands of years. And a chart showing the dramatic increase in energy supply over these same last 200 years.



### Global direct primary energy consumption

Direct primary energy consumption does not take account of inefficiencies in fossil fuel production.



So when I see all over the world a call for cutting back on energy production I ask myself what is the agenda here?

What I am referring to here are the claims that we can power down the world economy and run the world on wind and sun power. At present 3% of the world power is coming from "renewable energy" and the Paris Climate accords are demanding that by 2050 we must attain "carbon free" or "carbon neutrality". Is this possible?

Let me give you a reality check.

There is a fantasy about "the electrification of everything". That we can replace fossil or hydrocarbons with electricity and that electricity can be produced from PV panels and wind turbines. The quantity of scarce minerals and resources needed to replace

hydrocarbons with so-called renewable energy is so vast that it's unrealistic. The fact is "**renewables**" are actually '**replaceables**', as solar panels and wind turbines wear out and need to be replaced every 20-25 years, if not sooner.

The scale of energy consumption is so vast and the percentage supplied by solar and wind is so insignificant (3%), to provide the majority of global energy consumption we'd need to increase solar-wind 20-fold from 3% to 60%. The problem is the earth does not have enough scarce minerals to build this enormous infrastructure and then replace it every 20-25 years.

Here is a sobering quote....

*"Net-zero carbon dioxide by 2050 would **require the deployment of ~1500 wind turbines (2.5 MW) over ~300 square miles, every day starting tomorrow and continuing to 2050.**"*

*"Challenges of using 'green energy' to power electric cars: If wind farms are chosen to generate the power for the projected two billion cars at UK average usage, this requires the equivalent of a further years' worth of total global copper supply and 10 years' worth of global neodymium and dysprosium production to build the windfarms."*

*"To replace all UK-based vehicles today with electric vehicles, assuming they use the most resource-frugal next-generation NMC 811 batteries, would take 207,900 tonnes cobalt, 264,600 tonnes of lithium carbonate (LCE), at least 7,200 tonnes of neodymium and dysprosium, in addition to 2,362,500 tonnes copper. This represents, just under two times the total annual world cobalt production, nearly the entire world production of neodymium, three quarters the world's lithium production and at least half of the world's copper production during 2018."*

Every kilogram of these scarce minerals must be mined, transported and processed with hydrocarbons.

The problem with wind and solar is intermittency: modern industrial economies require steady electrical power 24/7 or they fail. Wind and solar generate power intermittently, meaning they can't generate a steady supply 24/7 nor can they generate electricity when consumers want to use it.

So the intermittency problem becomes a storage problem: how can we store surplus electricity in quantities large enough to power our vast consumption when the wind dies and the sun goes down?

**There are no cheap, easy answers to storage**, and ideas such as converting it all to hydrogen are not realistic due to cost and safety issues. There isn't enough lithium and other scarce minerals to build batteries for 2 billion vehicles and storage for every electrical grid on Earth. And note that lithium batteries have very limited lifespans and need to be replaced every decade, if not sooner.

We cannot allow the advocates of sun and wind energy to escape the issue of "cheap and reliable" energy. They constantly make the case for how cheap sunshine is but

who is going to supply the power at 6:00 O'clock when the nations stoves go on or the geysers go on in the morning? If they want a contract to supply energy then it must be required they provide energy for at least 12 hours a day and then they must invest in energy storage to supply constant reliable supply. Then watch how the "cheap" electricity suddenly becomes very expensive electricity.

The other insurmountable issue for them is guaranteed safe disposal of PV panels and windmills after 20 years operation. These pieces of equipment are full of toxic materials and if coal mines must put funds aside by law for mine reclamation after they are mined out, so must renewable tech put funds aside for proper disposal. Again, big cost increases!

### **My Kingdom Vision Climate - Energy Policy**

Climate has always changed and will always change. Climate change has always been a crisis for humanity in whatever forms....droughts, floods, cold cycles, hot cycles,. That is how the Lord made planet earth and the universe we find ourselves in. Ice cores from Antarctica, Greenland etc show there has been ages past when the carbon dioxide levels have been far higher than now and lower than now.

The unanswered issue is to what extent is man's activity affecting the climate and to what extent can we actually change world economy to change the climate? Germany shut down all their nuclear power stations and invested in vast wind farms and now have the most expensive electricity in the world and are also burning more lignite coal to backstop the "intermittency" problem with wind while also importing power from France that produces cheap electricity from their nuclear power stations that provide 80% of their national electricity needs.

Our responsibility as a church here in Southern Africa is to address the needs of our people. What is certain is that China, India, Russia, Europe etc are never going to stop using coal or natural gas for energy production. But our government is following the dictates of the UN and western governments and shutting down investment in coal mines and will not finance new coal power stations.

In the meantime we are energy starved while having a 1000 year's supply of coal for industrializing our nations of Southern Africa. This is an incredible gift from the Lord for our benefit and prosperity. How do we tackle our incredible poverty issues without dramatically increasing our energy supplies to our economies?

### **LNG (Liquid Natural Gas)**

Our next step in our energy transition is to immediately implement a LNG plan to supply 12,000 mw of power over the next 2-3 years. We need to decommission a number of old Eskom power stations which we cannot fix anymore. These stations are 40 years old. Companies like Siemens, General Electric, Alstom and others can supply modular 100 mw gas turbines and "build, operate and transfer" in 24 months. We need to install LNG offload and storage points in Saldanha Port, Coega Port Elizabeth and Richards Bay. There are 2000 mw gas turbines in Atlantis running on diesel and in Mossel Bay both areas can far better and cheaper be run on LNG.

The world is turning to LNG everywhere. There are abundant supplies everywhere and in our own region off our own coast Total has struck major gas deposit and in Mozambique off shore lies one of the largest gas deposits in the world. There is more than a 1000 years of cheap abundant gas supply in our region. In the interim until these fields come on line we can import from many suppliers in the world.

If government allows independent energy producers to use the Eskom transmission grid there is plenty of money available to immediately invest in gas turbine technology for sale to industry and municipalities. And it can all happen in a 2-3 year time frame which will give Eskom breathing room to shut down old power stations and refurbish the other good plants.

### **Long Term Energy Supply : LFTR Reactors**

Once our power network is functioning with abundant energy supplied from coal and gas we can have the room to develop long term abundant cheap carbon free energy from "Liquid Fluoride Thorium Reactors". Southern Africa is one of the biggest sources of thorium which is my preferred long term answer to modular small scale nuclear reactors that are inherently safe and do not produce weapons grade fissile material and also do not produce long term radioactive wastes. There is too much in this to discuss here but will do so in a later blog. But in my analysis of energy technology these LFTR reactors are the key to industrializing Africa and we have the scientists and technical expertise here in South Africa to develop this technology as our own home grown modular nuclear energy industry.

But what I see as God's plan for the ages is a progressive plan of "you shall receive power" The Lord has not expected us to labour under the limitations of human power to produce our goods and sustain ourselves. What we have has been a steady increase of augmented power to help us:

Animal power - then wind power - then coal/steam power - then electrical power - then chemical power (oil and gas) - then nuclear power. Each new power source increased the energy density of the power and required new machinery to capture and direct that power for greater production of wealth and prosperity.

Realistically we here in Southern Africa cannot talk about the 4th industrial revolution when we have not even rolled out the first and second industrial revolutions across our subcontinent. So we are now in the recently announced position of having the world's 3d worst unemployment as a nation. 74% of our young people have not work. 7-8 million of our adults are unemployed. That is incredible for people who have children that need to be fed and clothed and go to school. We cannot solve poverty and unemployment without abundant and cheap energy!

Next week I am going to lay out for you my national renewable energy program for transportation. I am going to present a "structural change" to our economy to produce millions of new jobs. I am going to present how we can replace 10 billion litres of petrol imports and 10 billion litres of diesel imports - that is R200 billion rand in value and instead of importing oil and sending that money overseas we can absolutely transform our unemployment crisis by spending that R200 billion in rural Southern Africa producing renewable fuels.

In addition I have other policy prescriptions for our transport sector to transform our economy.

We Christians need to enter the public square and join the policy debate!

I plan not only to enter the transport and energy debate with policy proposals but want to also do more "public policy" position papers on such diverse issues as:

- restructuring our government public and private partnership potentials
- design a new banking and finance sector including a new tax regime.
- design a better educational system for preparing our children for productive lives.
- design and new international governance and constitutional structure for we the people of Southern Africa.

It's time to get off the sidelines and get into the public arena. Here is a wonderful scripture for you to pray over....

***Pro 29:2 When the righteous are in authority, the people rejoice: but when the wicked beareth rule, the people mourn.***

But if the righteous want to be in authority and if the Lord is to place the righteous in authority then they need to come with God's policies and answers into the public square.