

Dr Thomas Chaize
Analysis Strategy Resources
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The price of electricity

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dani2989
Dr
Thomas
Chaize

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Site : www.dani2989.com

Email contact & Mailing Free :

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The price of electricity concerns everybody, but its variations are slow enough so that we did not pay it attention before receiving our invoice of electricity, to forget then again its rate.

The price of the electricity will not stay infinitely in hibernation, Kilo watt the hour, the Mega watts the hour and the GWh will soon go out of their lethargy to remind us that behind masts and high-tension cables, there is always a power plant with coal or a nuclear power station, a hydraulic dam, a windmill or a solar panel.

The increase of the price of the barrel of petroleum pulled the increase of the cubic foot of gases, the ton of coal and the pound of uranium, we forget too much frequently that 4/5 of the electricity produced in the world is it from these three fuels: coal, natural gas and uranium.

These three main sources of fuel allow the production of electricity, they increased a lot these last 6 years. So, it is very interesting to see the consequences which ensue from it, and especially those who will ensue, on the invoice of electricity of the private individuals and the manufacturers.

The consequences of the increase of the price of the barrel of petroleum on the price of the electricity

The petroleum is responsible for Big bang of the sector of the energy.

A. The increase of the price of the barrel of petroleum.

The increase of the price of the barrel of petroleum is doped by the demand of China and India, the offer has difficulties following the growth of the demand because of breathlessness of the world production. The causes are structural with behind plan the peak of production, also the punctual crises are only the consequence of this structural problem and not the source.

It is thus necessary to see the increase of the price of the barrel of petroleum more as a major change of tendency than as a temporary sudden high temperature.

If we accept this scenario, it becomes then very interesting to study the possible consequences for example on the price of the electricity.

B. The increase of the petroleum pulls the increase of the fossil fuels and the uranium.

The lethargic of the price of the oil during several decades anaesthetized the other sources of energy, however the alarm clock of the price of the barrel of raw product to resuscitate all other forms of energy since 2000.

The change of tendency of the price of the barrel of petroleum upset definitively a very old balance in the world of the energy, and with the alarm clock of the triptych coal, natural gas and uranium, the production and the price of the electricity go forcing to know some changes.

C. The consequences on the price of electricity.

In 2005, on 18 184 Tera Watt the hour (TWh), 81 % produce in the world are of thermale and nuclear origin. The world production of electricity can thus amount so:

- 2/5 coal
- 1/5 natural gas
- Nuclear 1/5
- 1/5 renewable (especially of hydraulic origin, but also windy, biomass, geothermal, sun, tidal energy, etc.)

With 4/5 of the electricity produced from these fuels the price of the Kilo Watt the hour (KWh) should increase thus necessarily in the next years.

There would be many nuances to be brought on the reasons of the future increase because the situation of the uranium and the coal are very different for example.

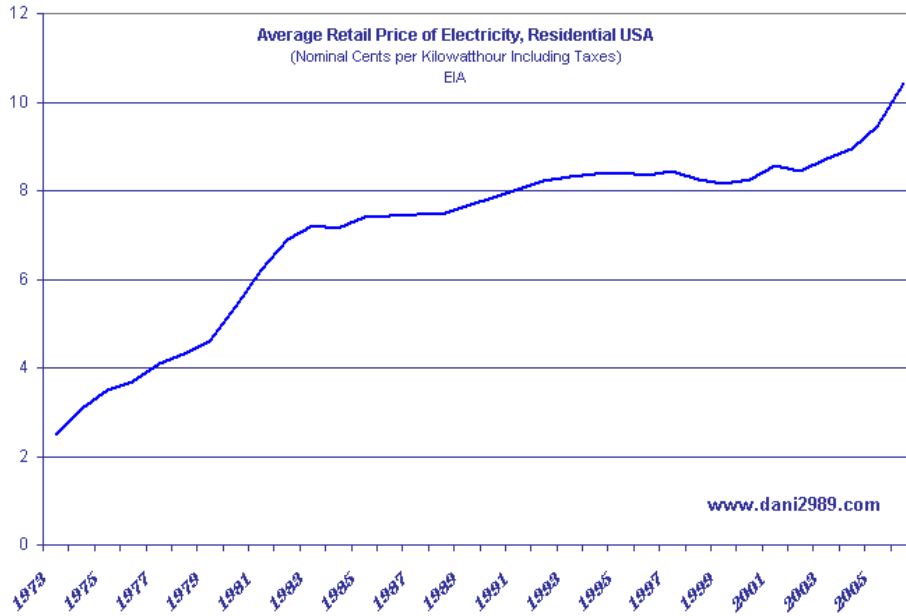
⇒ One of the reasons of the future increase, it is the increase of the production costs that explains partially by the increase of the price of fuels.

Evolution of the price of the electricity

Here is the price of the residential electricity in the USA in Cents by kilo watt hour (KWh) since 1973.

A. The price of the electricity in the USA for 30 years.

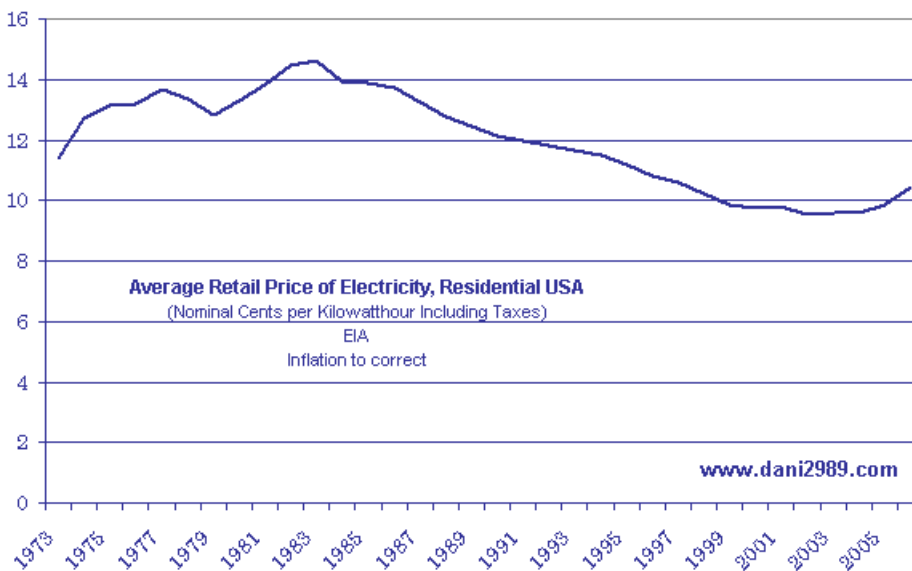
The graph shows that the price of the kilo watt the hour (KWh) was multiplied by 5 for 30 years. We could believe that the price of the electricity followed a normal increase, but you should not forget to correct this graph of 30 years of inflation.



B. The price of the electricity in the USA to correct of the inflation.

Once correct version the price of the kilo watt of 30 years of inflation, the graph gives very different information.

The rate of the electricity, rather than rise in a continuous way, rather tends to fall since the 1980's, it looks like the graph of the gold, with higher one in 1980, a low point at 2000 and the beginning of a reversal of tendency since 2003 with a horizon of 20 years.



C. A new tendency of the price of the kilo watt the hour (KWh).

This graph confirmed my feeling that the market of the electricity looks like a little a quiet volcano which would be on the boil shielded from the glances, but which prepares nevertheless an enormous eruption.

We can give a 1st objective coded to achieve which would be the rate of the 1980's, what represents an increase of the order of 50 % of the price of the kilo watt in the next years. Even if it can be very fast, it is always preferable to fix a longer term.

This graph gives us the situation of the electricity in the USA, but globally the tendency is the same everywhere, even if the situations are very different locally according to the organization of the market of the energy which varies many from the country to the other one.

The price of the electricity is going to rise

The long-term tendency is for the increase of the rates of the electricity.

A. The performances of the fossil fuels and the uranium.

For those who do not spend their day to scrutinize screens to watch the price of the cubic foot of gases, or the pound of uranium, here is a brief reminder. Between the bottom of 2000 and the summit of 2006, the price of the foot cubic of natural gas was multiplied by 7, the ton of coal almost doubled and the price of the pound of uranium was multiplied too by 7. The increase of the price of the barrel of petroleum had thus indeed echoed very concrete on the rates of the other energies.

The teasing spirits will say that certainly the price of fuels went up however it is of past! Personally, I think that this tendency is durable because it is of structural and not cyclical origin.

B. The price of the electricity.

And the price of the electricity that has you it makes during this period? It followed a reasonable increase of 20 % which indicates especially a change of tendency long term. The decline continues of the price of the Kilo Watt for 20 years it is ended with new century.

C. Long-term Perspective of the price of the electricity.

The price of the Kilo Watt reacted slowly for two reasons which I shall so summarize:

- Most of the private producers signed contracts of delivery for very long term (20 - 30 years) for a majority of their production.
- When the production of electricity is dealt with by nationalized producers, the State prevents the prices from rising too fast by subsidizing more or less directly. Nevertheless, both positions can be only temporary, because a private company cannot produce infinitely at a loss and a State cannot pay *ad Vitam æternam* charges her of electricity of her taxpayers.

With an increase of the costs and an increase of the demand, the price of the electricity should continue to rise during the next years.

The imprisoned producers of electricity, by the long-term contracts or the tariff requirements of a State, are going to have to face an inevitable increase of production costs. Fuels are one of the variables of the problem, but not the only one.

I think that inevitably the price of the kilo watt the hour (KWh) is going to increase, in spite of all the existing obstacles.

However, the way and the moment when it is going to arrive, are going to be different of a country in the other one, even if the tendency of long-term bottom seems to me to be everywhere the same: the increase.

I wanted to give you my feeling onto the perspectives of the price of the electricity, the reasons of an increase are multiple, but I only kept that one by concerns of light, the most important: the price of fuels. I shall approach the other reasons on next subjects on the electricity.

⇒ Last small notices, it is indeed on evident, that the winners in this increase of production costs it produce renewable energy.

Be careful: this is naturally very subjective, and thus to consume with the biggest moderation.

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