January 30, 2022

“Futurs énergétiques 2050” (*Energy futures for 2050*)

A reference study by RTE[1] with constrained projections

The above-mentioned RTE study, published on October 25, 2021, has been rightfully praised for its high-quality analysis. Unfortunately, it disregarded certain hypotheses.

Among its accomplishments, an in-depth consultation of civil society (industrialists, institutions, various organizations, experts, etc.) was welcomed. This allowed for an analytical view and brought out numerous proposals concerning the hypotheses to be retained and discussed for this highly important study.

One of the hypotheses that led to numerous interventions and debates is the level of electricity demand that will be suitable by 2050. This is a subject of vital importance given that by that time fossil fuels, which currently account for more than two-thirds of the country's energy consumption, will have to be phased out as carbon neutrality must be achieved. Electricity will then become the country's ultra-dominant energy vector, the only minor complement being biomass, whose annual renewal potential will be limited and that will be used directly for mobility (biofuels) and to produce heat. Abundant electricity production will thus be vital to meet the country's overall energy needs.

During the consultation, the range of electricity demand hypotheses proposed for 2050 relative to today’s demand was very wide, from no change or even regression for some degrowth NGOs, to an increase of at least 80% for several entities such as the Academy of Science and the Academy of Technology and several organizations such as Sauvons le Climat, PNC-France, Le Cérémé and others, as well as for some independent experts. It is important to note that same order or even higher (up to 100%) increases are anticipated by the European countries most comparable to France, i.e., Germany and the UK. The high demand hypotheses proposed for France therefore seem both reasonable and realistic if we are to avoid a mortifying decline for the country and its inhabitants. Finally, setting a high target is a "no regrets" approach because it is infinitely easier and less costly to adjust an industrial potential that has some leeway than to be forced to increase this potential urgently. Indeed, given that this is a long-term industrial sector, any underestimate can only lead to very costly electricity shortages that would lastingly affect the country’s economy and the lives of its citizens.

However, RTE's reference scenario assumes electricity demand that is only barely 35% larger than today's. Slightly higher variants have been mentioned but have not been covered by complete

1 RTE: Réseau de Transport de l’Électricité, France’s transmission system operator.

scenarios. More importantly, the high demand hypotheses mentioned above were ignored. Is this a refusal to examine a possible outcome?

As a result, the study released by RTE last October 25th does not explore the full range of possibilities while a high-quality prospective analysis conducted according to standard practices and with scientific rigor should consider all options. This is beyond comprehension because it deliberately limits the foresight which, by definition, should remain open. The same is true with the limitation to 50% of the nuclear power share in the electricity mix.

It would therefore be even more incomprehensible if RTE did not complete its study by taking into account both the high demand hypotheses mentioned above and a nuclear power share that is not limited to 50%. If the consequences of these hypotheses were to not be examined, the objectivity of RTE's approach would be put to serious doubt and would also severely contravene its legal obligations, which require it to present sincere results that are not limited to certain chosen hypotheses. It is high time for RTE to elaborate these complementary prospective studies, which are indispensable for a complete comparative vision of possible realistic futures.