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Academic Opinion of Economic Scholars
on Champsaur Commission's Paper

By François Lévêque, Claude Crampes, Jean-Michel Glachant,
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RSCAS 2009/38
ROBERT SCHUMAN CENTRE FOR ADVANCED STUDIES
Loyola de Palacio Programme on Energy Policy

ACADEMIC OPINION OF ECONOMIC SCHOLARS ON CHAMPSAUR COMMISSION'S PAPER

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WP–IFM-70

Abstract

This paper is the joint position taken by nine academics on the French debate introduced by the "Rapport de la commission présidée par Paul Champsaur sur l'organisation du marché de l'électricité" on April 2009. In order to reform the French reform, the Champsaur commission has made three main recommendations: (i) withdrawing the current retail administered tariff for business (ii) maintaining retail administered tariffs for households (iii) introducing a wholesale administered tariff on electricity from nuclear power generation. This rapport invites discussions on the French market design. Our academic joint position challenges these propositions. The authors welcome to the fact the commission proposes to abandon the tariff for business as very complex to implement (and hence costly) and freezes competition. However, authors have reservations about the other two recommendations. They are mainly based on the classical two-prong economic test to support a new regulation: (i) assessing its costs and benefits to ensure the latter offsets the former; (ii) comparing the recommended regulation with alternative instruments to verify that it is the best choice.

Keywords

Champsaur commission; French Electricity market reform; Nuclear industry reform; Market design; redistribution of scarcity rents

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As economic scholars we are pleased to respond to the invitation from the members of the Champsaur commission to react to their report on the organization of the electricity market.

We consider this report[2] as an important contribution to the on-going debate on the interface between member states' energy policy and EC energy liberalization, security of supply, and climate change policy. It rightly highlights key French energy specificities. It is a welcome attempt to solve market and regulatory failures that have appeared over the past years in the opening up the French electricity retail markets to competition and in the functioning of the regional wholesale electricity market.

One major specific feature of France is that it hosts a large fleet of nuclear reactors. It is owned by the incumbent, EdF, and provides this 85% state-owned enterprise with an economic advantage to compete on price. Moreover, because the energy mix in continental Europe is unbalanced, French nuclear power generation benefits from an extra scarcity rent which is likely to last for a long time[3].

We are also aware of specific political constraints that have to be taken into account when proposing solutions to reform the current French electricity organization. Firstly, it seems critical that French citizens enjoy a visible pay-back to maintain the high social acceptability of nuclear power generation and avoid opposition to the construction of new reactors in the future. Secondly, electricity-intensive industry needs specific transitional provisions in order to maintain a competitive viability while new and fully liberalized world trading arrangements are put in place without undue advantages for locations where the environmental requirements are absent or lax. Thirdly, new entrants willing to compete with EdF in building new nuclear power plants and in supplying final consumers have little room to develop their businesses in France. New entrants in electricity supply could be eliminated if they cannot purchase base-load electricity at better conditions than those currently offered on the wholesale market.

In order to take into account these specificities, the Champsaur commission has made three main recommendations: (i) withdrawing the current retail administered tariff for business (ii) maintaining retail administered tariffs for households (iii) introducing a wholesale administered tariff on electricity from nuclear power generation.

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2 *Rapport de la commission présidée par Paul Champsaur sur l'organisation du marché de l'électricité*, avril 2009, hereafter Champsaur Report, available at http://www.developpement-durable.gouv.fr/article.php3?id_article=4864

3 The extra scarcity rent is estimated to be between € billion 3,3 to 8 per year. See D. Finon and E. Romano, 'Electricity market integration: redistribution effect versus resource allocation', *Energy Policy*, n° 37, 2009.

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WP–IFM-70

We welcome to the fact the commission proposes to abandon the so-called TaRTAM[4]. As has been rightly pointed out in the commission's report this tariff for business[5] is very complex to implement (and hence costly) and freezes competition. However, we have reservations about the other two recommendations. Our arguments are explained below. They are mainly based on the classical two-prong economic test[6] to support a new regulation: (i) assessing its costs and benefits to ensure the latter offsets the former; (ii) comparing the recommended regulation with alternative instruments to verify that it is the best choice.

The perpetuation of administered retail tariffs for households

We are not convinced by the reasons advanced by the commission for maintaining administered tariffs for households[7]. It is argued that individual French consumers are not mature enough. We do not see why they would be different from English or German consumers who learnt to enter into the retail market many years ago. It is also argued that smart metering is in its infancy. We are afraid the commission is making a mistake here: low and flat administered tariffs will hardly promote the diffusion of smart metering devices and technologies.

A sound reason would be required to justify the perpetuation of current retail administered tariffs for French households because their drawbacks are severe. They disincentivize electricity savings and hence conflict with environmental and climate change policy[8]; they reduce price competition between suppliers; and in so far as they are lower than market prices, they discourage investments in new power generation capacity.

We recognize that administered retail tariffs for households are a means to redistribute the extra scarcity rent to consumers and provides a way of increasing their acceptance towards nuclear power generation. However, the Champsaur commission is also proposing a different instrument to transfer the benefits of cheap nuclear energy to consumers, i.e., a cost-reflective regulated wholesale tariff of the nuclear kWh. If such constraint is imposed at the wholesale level, a competitive market would pass the advantage on to consumers. So it is not necessary to have two instruments to achieving one goal.

As argued below, we do not believe an administered price at the level of nuclear generation is advisable. But this does not imply, in our view, that administered retail tariffs are necessary. In fact, the reward can be transferred to French citizens in other ways than by reducing their electricity bill:

Firstly, they can be rewarded as tax-payers because the French State owns 84,7% of EdF, and hence it can extract most of the extra scarcity rent as a dividend.

Secondly, to make the reward more visible, EdF extra profits can be taxed and this tax can be reallocated through a check sent once or twice a year to each household[9]. To provide the right

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4 The acronym stands for Tarif Réglementé Transitoire d'Ajustement du Marché. For a brief presentation on TaRTAM and other administered tariffs see the website of the Commission de Régulation de l'Energie at http://www.cre.fr/fr/marches/marche_de_l_electricite/marche_de_detail.

5 See Champsaur Report, supra note 2 at 27-28, footnote 6.

6 For a seminal application of this test to the mitigation of external effects, see R. Coase, 'The Problem of Social Cost', *Journal of Law and Economics*, Vol. 3, 1960**.**

7 "En revanche, pour les petits consommateurs [...] du fait de leurs caractéristiques spécifiques (inertie, comptage), la commission préconise le maintien des tarifs réglementés". See Champsaur Report, supra note 2 at 18.

8 Flat and low tariffs reduce the benefit to save electricity, especially during peak hours. This is damaging in terms of CO2 emissions because a part of French households' electricity consumption comes from non-nuclear plants and this part is larger during peak times.

9 A tax that raises no revenues for the government, but refunds all revenues to consumers is sometimes called an untax. An illustration is given by the Alaskan oil pipeline which revenues are redistributed to every Alaskan resident every June as a

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WP–IFM-70

incentives to save electricity, the amount of the check can be calculated on the average household consumption. Those who consume less than the average will receive more money than they would lose with the increase in electricity price owing to the abandon of tariffs; those who consume more will be under-compensated. Both will have incentives to reduce their consumption because their action will only infinitesimally reduce the check they will receive.

Thirdly, the extra scarcity rent could be transferred as an offset to the fixed charge that distribution companies charge domestic consumers.

A fourth option could consist in imposing obligations to EdF which provide an advantage both to consumers and to society, such as a quick and free delivery of new smart meters to all consumers.

Because studies are lacking, we do not exactly know which of those four alternatives is the best redistributive mechanisms. We do know, however, that we need:

i. to disconnect the individual reward from the individual consumption level. We are not aware of theoretical or empirical evidence showing a correlation between households' acceptance disutility for nuclear power generation and their level of consumption that would require giving a higher reward to large consumers. Moreover, knowing that on average high electricity consumers have higher incomes than low electricity consumers, it does not seem obvious to us that sharing the historical nuclear rent between households depending on their consumption is especially fair.

ii. to limit the reward within a time limit, since its aim is a transfer of a comparative advantage, originated by the stock of existing nuclear generators, to households; this can be done with a once-and-for-all operation or spread over a limited and definitely set length of time.

We are concerned that the perpetuation of administered tariffs for households in addition to a wholesale regulated tariff would only make the market less open and the regulation more complex and costly. We therefore encourage French lawmakers not to consider as a necessity to reward households for supporting nuclear power generation by offering consumers a regulated retail tariff which is equivalent to a rebate pro rata to their consumption. We recommend to investigate alternative mechanisms and compare their respective drawbacks and advantages before selecting one.

Opening and regulating the access to base-load electricity generated by the historical fleet of nuclear reactors

The Champsaur commission recommends opening the access to EdF nuclear facilities as follows:

- setting an administered cost-reflecting wholesale tariff. The cost basis will include, *inter alia*, operating costs, maintenance and dismantlement costs[10].

- limiting the quantity that can be purchased at this tariff according to the consumption of purchasers' clients who are located in France. This quantity per purchaser will be (i) set ex ante depending on its customers portfolio and its short-term predictable development and (ii) adjusted ex post, say each semester[11].

(Contd.)

check a little over 1000$. Another example is the carbon untax, see, for instance,S. Stoft, 'Carbonomics - how to fix the Climate Change and Charge it to OPEC', 2008.

[10] "[offrir l'accès] à un prix régulé reflétant la réalité des coûts complets du parc historique de production nucléaire français, incluant les coûts de maintenance, d'allongement de la durée de vie des centrales nucléaires, de démantèlement et de la gestion des déchets issus des centrales nucléaires". See Champsaur Report, supra note 2 at 14.

[11] "Pour que les fournisseurs assument le risque lié à leur activité commerciale, les volumes doivent être attribués, non pas en temps réel, mais avec une périodicité [...] (par exemple trimestriellement ou semestriellement) en fonction du portefeuille prévisionnel des clients; pour ne pas générer d'effet d'aubaine, les conditions d'accès doivent être ajustées ex-post en fonction du portefeuille effectif des clients, soit en volume, soit par complément de prix." . See Champsaur Report supra note 2 at 14.

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WP–IFM-70

- restricting the administered tariff to the production of existing nuclear plants. New builds such as Flamanville 3 will be free to sell their output. The same applies for exporting base load electricity from existing plants.

Economists view forced access to facilities that do not enjoy a natural monopoly feature as a perilous government intervention[12]. It requires highly intrusive and costly regulation. It tends to facilitate vertical and horizontal cartels. It may reduce investments in new capacity and innovation. We support EC case law stating that only exceptional circumstances can justify mandatory access to physical or intangible assets[13]. We do not believe such circumstances are encountered in this case.

The Champsaur commission rightly rejected applying the so-called essential facility doctrine to EdF's nuclear fleet for access to nuclear power generation. According to this legal doctrine, an input must be indispensable to exceptionally justify public intervention to force the access. This is not the case for nuclear power plants because entry is possible into the French wholesale and retail markets without such an access. In fact, albeit modest, entry has occurred in both markets[14].

The Champsaur commission does not find exceptional circumstances but only contingent ones: "The consequences of history and the considerations specific to nuclear power justify a regulatory intervention"[15].

We are concerned with this argument. Once accepted, it could (and probably would) be applied to a large number of economic situations and several industrial sectors in a number of countries. It could start a run on protectionist measures with the aim of granting the population of any country or region an advantage stemming from the local endowment of natural resources or historic circumstances. It sets a too low standard in justifying government-forced access and can severely discourage companies from investing with the perspective to gain a dominant position by merit. As far as the electricity sector is concerned, it cannot be excluded, for instance, that in 15 years new historical reasons and unchanged specifics of nuclear power generation would require forcing the access to plants that will be built from now up to 2024!

The commission's objective in opening and regulating access to the nuclear power fleet is to strengthen competition on the retail markets: "A dedicated regulation to baseload power generation is [...] necessary [...] to achieve effective competition in supply"[16]. We are pleased the members of the commission endorse the high EC priority on building competitive energy markets. In fact, effective competition on electricity and gas markets in the European Union is a critical ingredient to improve security of supply and to minimizing the costs of climate change policy.[17]

However, we wonder whether the recommended regulation to achieve it is too costly and too risky relative to its possible benefit.

Firstly, we are concerned with the regulatory costs such a recommendation would entail. A large amount of information will be necessary as for any cost-reflective price setting. Moreover, quantities

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[12] See, for instance, as a seminal paper: Philip E. Areeda, 'Essential Facilities: An Epithet In Need of Limiting Principles', 58 *Antitrust Law Journal*, 841 (1990).

[13] See, for instance, judgments of the European Court of Justice in *Oscar Bronner v. Mediaprint* European (case C-7/97, 1998) and in *IMS Health v. NDC Health* (case C-418/01, 2004).

[14] By contrast, entry would have been impossible without an open access to the transmission grid.

[15] ''Les conséquences de l'histoire et les considérations propres au nucléaire légitiment une intervention du régulateur[...]'', see Champsaur Report, supra note 2 at 11.

[16] "Une régulation spécifique sur le marché de la production en base est donc nécessaire afin de garantir l'égalité de tous les fournisseurs et le développement effectif de la concurrence sur le marché de fourniture". See Champsaur Report, supra note 2 at 10.

[17] See J.-M. Glachant, F. Lévêque and P. Ranci, 'Some Guideposts on the Road to Formulating a Coherent Policy on EU Energy Security of Supply,' *The Electricity Journa*l, Vol. 21, Issue 10, December 2008.

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WP–IFM-70

will also have to be set and this requires gathering information on consumption and clients. In addition, as was pointed out by the commission, the envisaged regulation is dynamic and requires fine-tuning[18]. More importantly, the regulation could lead EdF to make less effort to reduce its cost of production. Lastly, lobbying and litigating expenditures are likely to be huge. In fact, influencing the regulator or the government to set a more favorable regulated price, or expecting a judge to modify it, will have a high pay-back. It would therefore be rationale for parties with vested interests, especially EdF and its competitors on the supply markets, to spend a lot of efforts and money in lobbying and fighting for years in French and in European courts. This will result in allocating more efforts and money in rent-seeking than on investing and securing energy supply.

Secondly, we are concerned with the risk of regulatory opportunism. The Champsaur commission does not mention which public body will decide on the price. Will it be a specific independent agency, the current energy regulatory authority (CRE), the ministry of economy and finances? The Champsaur commission rightly identifies the risk of information asymmetry between the regulated and the regulator as a regulatory failure[19]. It ignores another one: the specific interests of the regulator and the government. One cannot assume they are benevolent, that is, only acting to maximize welfare. In the recent past, the French government has shown that it can refuse an increase in regulated energy tariffs or in grid access pricing even though the increase in cost was well-documented. Future French government might have reasons for manipulating the regulated wholesale tariff. For instance, a government may want to increase the tariff to gain a larger dividend to balance its budget; or conversely, it might want to decrease the tariff before an election to alleviate economic difficulties of electricity-intensive industry and to gain more support from small businesses. Such government opportunism creates major uncertainty and entails a risk of financial hold-up. It could therefore deter investments.

Thirdly, we are concerned with the risk that the regulation would not be as effective as expected in strengthening competition. This concern may seem puzzling because we have recognized above that today competition is limited by the competitive advantage EdF has due to its production costs. However, it is very important to acknowledge that access regulation can facilitate collusion among purchasers. It provides occasions for competitors to officially meet and discuss costs, prices and market shares. Suppliers benefiting from the energy access would rather sustain a buyer cartel to get better purchasing conditions than compete in innovating on the downstream market. Collusion with EdF might also appear if the administered price is low. As a supplier EdF might benefit from a high cost-price margin in the retail markets and so might its rivals. Generally speaking, regulatory authorities overlook the possible anticompetitive effects of their action. They are less experienced with these matters than antitrust authorities and competition is not their unique objective.

It is not obvious that the benefit of the envisaged regulation is worth its costs. The production cost of electricity is 5 to 10 times higher than the cost of selling it to consumers. Each time the regulating production would result in 1% inefficiencies (e.g. owing to disincentives to incumbent cost minimization) a strengthening of competition in retail leading to a 5 to 10% decrease in costs will be needed to keep that regulation welfare-enhancing. Moreover, the adverse effects of the regulation will affect all the production whereas the positive effects of the gain in competition will mainly lie in supplying small consumers, a really smaller share of the market.

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[18] "La régulation proposée par la commission nécessitera de mettre en place un contrôle fin et continu par le régulateur". See Champsaur Report, supra note 2 at 18.

[19] "Aujourd'hui, trois risques identifiés co-existent : [...] l'absence de référence et l'asymétrie forte entre le régulé et le régulateur". See Champsaur Report, supra note 2 at 16. For a comprehensive view on regulatory failures, their consequences and their remedies, see J.-J. Laffont and J. Tirole, 'A theory of Incentives in Procurement and Regulation', MIT Press, Cambridge, 1993. For a primer in French, see F. Lévêque, Economie de la Réglementation, Editions La Découverte, 2d edition, 2004.

We are inclined to believe that the Champsaur commission's recommendation to introduce a wholesale administered tariff on nuclear power generation is likely to be welfare detrimental.

Conclusion

Introducing a wholesale administered tariff on base load nuclear power generation is a disruptive and radical proposal. Once implemented, its effects would last at least a decade and it will be difficult to eliminate this regulation even if it proves to be welfare detrimental. We have shown that such an outcome is realistic, not merely plausible. Therefore, it would not be reasonable to French law makers to adopt this recommendation without better verifying the two-prong economic test to adopt a new regulation is passed. The Champsaur commission has not provided sufficient evidence to demonstrate that the benefits of its proposal offset its costs, and has not proceeded to a sufficient verification ensuring the recommended regulations are less costly than alternative instruments.

If French law-makers decide on adopting a wholesale administered tariff on nuclear power generation without further investigation, we recommend them not to maintain administered retail tariffs for households. We also recommend them to pay great attention to the design of the institutional framework of the regulation on nuclear power generation, particularly (i) to reduce the discretionary power of government to intervene in the regulated wholesale tariff and (ii) to involve competition authorities. A poorly-designed framework could lead to severe adverse consequences on investments in power generation and in supply activities. Hence damaging security of supply on the eve of a major investment wave.

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WP–IFM-70

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WP–IFM-70

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