



**“Policy Memo addressed to President Emmanuel Macron on French involvement in solar energy development in the Middle East”**

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Course “Conflicts and Negotiation in the Middle East”

Taught by Professor Jean-Pierre Filiu

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Sarah Dahl  
22/11/2018  
Conflict and Negotiation in the Middle East, Prof. Filiu

Dear President Emmanuel Macron,

I am writing to persuade you to pledge your support for French involvement in solar energy development in the Middle East.

The nascent Middle East solar power market presents a promising business and research opportunity for France. To help solar researchers and companies build connections with Middle East partners, thus helping the French become competitive players for Middle Eastern tenders, I recommend you create financial incentives and an official position for solar power relations in the region. Below, I contextualize these suggestions with a brief background on solar power in the Middle East, and I explain why promoting solar partnerships there would be beneficial for France. I hope you consider exploring these possibilities, and I thank you for your time.

### **Solar power in the Middle East**

Middle Eastern countries have realized massive profits in selling oil and gas to other countries. With that wealth, they have been able to progress exponentially—constructing cities, infrastructure, and institutions that rival and sometimes surpass those in the West.

But oil and gas reserves won't last forever, and relying on these resources for domestic needs, while simultaneously exporting at current rates, is unsustainable for Middle Eastern states. Looking to the future, governments know they will inevitably need to choose fueling domestic energy needs over profiting off oil and gas exports. Thus, countries are eyeing renewable sources such as wind, solar, or nuclear to move towards a sustainable future. Solar power is the most promising of these options, as the Middle East benefits from year-round sunshine and one of the highest irradiation levels in the world.<sup>1</sup>

Many Middle Eastern states have begun researching and investing in solar. For example, the United Arab Emirates has built one of the Middle East's largest solar power plants, Shams 1, and hosts projects at Khalifa University dedicated to studying solar power.

Still, while some solar projects are underway or have already been built, they cover a tiny fraction of the region's energy production and needs. Improving solar panel efficiency also presents a challenge. Thus, solar in the Middle East remains a relatively virgin commodity—but Middle Eastern states have the finances and desire to develop solar projects, and France has the manpower and expertise to make this happen.<sup>2</sup>

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<sup>1</sup> Solar irradiation is a measure of the energy reaching the earth from the sun. For data on global irradiation levels, visit NASA's Power Data Access Viewer at <https://power.larc.nasa.gov/data-access-viewer/>, or the World Bank's Global Solar Atlas at <https://globalsolaratlas.info/?c=29.156959,37.775803,4&m=sg:dni>.

<sup>2</sup> For example, the UAE's Mohammed bin Rashid Al Maktoum Solar Park, the largest such park in the Middle East, will reduce less than a quarter of the country's CO<sub>2</sub> emissions when finally complete. A 2016 World Energy Council report describes the Middle East as a "high-resource region" with "untapped" potential.

## **France's role in solar power**

France hosts rising solar businesses, longstanding energy giants, and research centers alike that offer new technologies to combat problems affecting solar panel productivity.

For example, France's top research institute for solar power, INES, partners with 100s of French and international companies, large and small, to develop innovative solar tech. They have worked on optimizing the efficiency and yield of solar cells, two aims that would be attractive to Middle Eastern partners seeking to better solar power output.

Another solar research center, L'Institut Photovoltaïque d'Ile-de-France (IPVF) works with EDF and Total, as well as university students and scientists, to innovate new products. In July, an IPVF PhD student helped the Institute become one of the world's few laboratories able to manufacture a certain type of incredibly efficient solar cell.<sup>3</sup>

There are many impressive private actors as well. Apollon Solar, a mid-size company, has invented a special type of ultra-resistant photovoltaic solar cell that could prove especially beneficial to Middle Eastern countries prone to sand storms. Another company, Hyseo Energies Renouvelables, has already developed a partnership with the city of Amman, Jordan, where it installed charging stations for electric cars in 2015. Both of these companies are members of my trade union, France Solar Industry.

Finally, EDF and Total boast growing solar sectors, and EDF has even begun to expand into the Middle Eastern market. EDF's subsidiary, EDF Renouvelables, has a stake in a solar facility that is part of the Mohammed bin Rashid Al Maktoum solar park in Dubai, and the subsidiary is also involved in several projects in Israel.

## **Policy Proposal**

My proposition is that you: 1) offer exclusive tax breaks to French solar companies and 2) create a position with the official role of boosting partnerships between French entrepreneurs and researchers and Middle Eastern states seeking solar expertise.

## ***Tax incentives***

The Crédit d'Impôt Recherche (CIR) already offers companies a generous benefit for research and design expenses. But the CIR should be expanded for solar companies with Middle Eastern partnerships, and the process for approval simplified. In addition, social security contribution exemptions, currently only offered to a small subset of startups and young companies, should be awarded to all solar companies working in the Middle East. The social security tax presents an excess burden that prevents French solar companies from excelling. Finance Minister Bruno Le Maire has said, "We want France to be the

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([https://www.worldenergy.org/wp-content/uploads/2017/03/WERResources\\_Solar\\_2016.pdf](https://www.worldenergy.org/wp-content/uploads/2017/03/WERResources_Solar_2016.pdf), 2). Solar Power Europe's "Global Market Outlook" calls the Middle East a region with "huge business opportunity for solar companies to export their know-how and scale up investments in these new markets," (<http://www.solarpowereurope.org/wp-content/uploads/2018/09/Global-Market-Outlook-2018-2022.pdf>, 42).

<sup>3</sup> Read more here: <http://www.ipvf.fr/ipvf-manufactures-its-first-iii-v-nanowires-solar-cells-on-silicon/?lang=en>.

most attractive country for research, innovation and new technologies in Europe.”<sup>4</sup> You, Mr. President, have positioned France as a “startup nation,” supporting this goal by enticing foreigners with accessible visas, and by encouraging tech startup creation. But French companies that don’t qualify as startups, and may be scientific rather than tech-based, need assistance, too. Offering tax incentives for solar companies with Middle Eastern ties can be part of what makes France a nation of innovation.

### ***Liaison between Middle East and France***

To my second point, an office should be formed, tasked with creating partnerships between Middle Eastern leaders and French actors. A solar liaison would develop relationships with Middle Eastern leaders in the public and private sector, and promote programs to connect leaders with French researchers and entrepreneurs. The liaison could use existing partnerships as models—for example, Hyseo, which has already worked in Jordan, could serve as inspiration. The liaison could also work more closely with my syndicat, or organizations such as the EU-GCC Clean Energy Technology Network.

### **Why should France do this?**

#### ***The world is watching***

France hosted the November 2015 United Nations Climate Change Conference of the Parties (COP 21), positioning itself as the leader in the fight against climate change. During this historic moment, your predecessor François Hollande committed to the development of solar power across the globe by founding the International Solar Alliance (ISA) with Indian Prime Minister Narendra Modi. As you know personally, having attended the ISA’s first international summit this March in New Delhi, the ISA aims at spreading solar technology and reducing the costs thereof, particularly in developing countries. You have pledged \$1 billion from France to achieve these goals. As a very young organization, the collaboration ISA aims for is still pending (it took two years for the first conference to occur). Most of ISA’s activity thus far has occurred in India, and collaboration has focused on deciding and signing agreements and declarations. By helping France expand solar power in the Middle East, Mr. President, you can fulfill the leading role France committed to in founding the ISA. Supporting French solar connections in the Middle East will work towards ISA’s mission by spreading the knowledge and construction of solar power globally. Additionally, you can use this promise to encourage other Middle Eastern states to sign the ISA Framework Agreement—so far, only the UAE, Yemen, and Egypt are signatories.

#### ***A greener future***

France aims to lower its fossil fuel reliance in the coming years and increase its renewable energy consumption. For this to happen, renewable energies need to become more efficient. This will only be possible with further research and development—and what better way to do this than through simultaneously building partnerships in the Middle East? French companies would benefit from the financial and knowledge-based

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<sup>4</sup> Marie Mawad, Rascouet, Angelina, Fouquet, Helene, “Startup Nation? Entrepreneurs Still Toil in Macron’s France,” Bloomberg, Sept 25, 2018, <https://www.bloomberg.com/news/articles/2018-09-25/startup-nation-entrepreneurs-still-struggle-in-macron-s-france>.

gains from increased research and development in solar technologies. Problems such as maximizing the potential of silicon to make solar cells more efficient, or dealing with the build-up of dust on solar cells could be studied through research partnerships in the Middle East. French scientists could become world leaders in the field, spreading advanced solar power knowledge both at home and abroad.

### ***Science and technology***

Historically, France has lagged behind other Western countries like the US and UK in tech entrepreneurship. This has begun to change with your policies, Mr. President. You can push France's potential even further by making it easier for solar companies to take advantage of opportunities in the emerging field of solar tech, starting in the field's most promising market: the Middle East.

### ***Building bridges***

Connecting with Middle Eastern actors would also strengthen friendly relations between France and Middle Eastern states. Partnerships of joint cooperation and mutual benefit will, at the very least, begin to soften fraught relationships.

### ***Precedent***

I have one final reason why France should become involved in solar power in the Middle East—and that is that we already have. A small number of connections between French companies and Middle Eastern states exist; and they need your assistance to grow.

For example, INES is working with Tunisia's Agence Nationale de la maîtrise de l'Energie to offer recommendations on how to optimize solar panels there. EDF helped finance the Mohammed bin Rashid Al Maktoum solar park in the UAE, as mentioned above, and they signed a memorandum of understanding with Masdar, the Abu Dhabi Future Energy Company, in January, to work on projects in sub-Saharan Africa.

### **Why now?**

France has already pledged €1 billion to the ISA, and has given millions to French solar research centers (IPVF, and INES, for example, were selected as investissements d'avenir, benefiting from €18.5 million and €39 million grants, respectively). Why should France do even more to help solar technology grow? My answer is simply, because money is not always enough. To develop solar technology, French companies and scientists need concrete support, not just ephemeral funding. They need an official liaison to build connections with promising partners in the Middle East, and they need tax incentives, which, unlike grants, will last into the future and are not contingent on successful grant applications. Additionally, time is of the essence: the market for solar technology in the Middle East will only remain un-dominated for so long, and companies and researchers need immediate support to access these unique opportunities.

### **Conclusion**

I have aimed to show that the Middle East should be targeted for French solar partnerships because it promises to be the most financially and scientifically rewarding market for solar development, thanks to natural sunlight and the sustainability goals of

Middle Eastern states. Whether large-scale industrial projects or consumer-directed solar products, the Middle East presents a rich market for solar producers and researchers.

The oil-rich states have the money to make this a lucrative position for French actors. Partnerships would boost France's economy, create jobs in the solar tech sector, and allow existing solar scientists and companies to learn more about optimizing solar technology. Starting in this region will be an excellent jumping off point to invent and test new products and expand into other markets. It will strengthen our relationships in the Middle East. France could become a leader in solar power, not just in the Middle East, but around the world. All this can happen because of you, Mr. President.

French involvement in the Middle Eastern solar power sector is ready to blossom; it only needs your further support, in the form of tax breaks and the creation of an office to assist in forming connections.

Sincerely,

Xavier DAVAL

*Président de SER SOLER, Commission solaire photovoltaïque du SER*

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