

Turkish Solar Energy Industry Association

Market Update: Current Trends and Challenges in the Turkish PV Market

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- **Current Market Situation**
 - **Licensed**
 - **Unlicensed**
- **Main Threats**
 - **Licensed**
 - **Unlicensed**
- **Future Scenarios**
 - **Business as Usual**
 - **Solar friendly Approach**

Current Market Situation Licenced & Off-Licence

- **Licenced**
 - **600 MW – Initial Capacity**
 - **June 2013: EMRA Applications**
 - **March 2015: 3 Bids. 259 MW Distributed.**
 - **«0» MW licence - yet.**
- **Unlicenced (as of March 2015)**
 - **4,736 MW Capacity; 3,319 MW Distributed.**
 - **70 MW Installed capacity, 54 MW grid connected.**

Main Threats (1/2)

Licensed

- **High Licence Fees (upto 1,000,000 USD/MW; World Record!)**
- **Delay in Installations**
- **Financing; Frozen Assets (Bank Letters)**
- **Pre-licence and Licence Bureaucracies**

- **Next Phase:**
 - **High capital & Bank Quar. Letters (Frozen Assets!)**
 - **New Capacities? Where & When: Continuity!!!**

Main Threats (2/2)

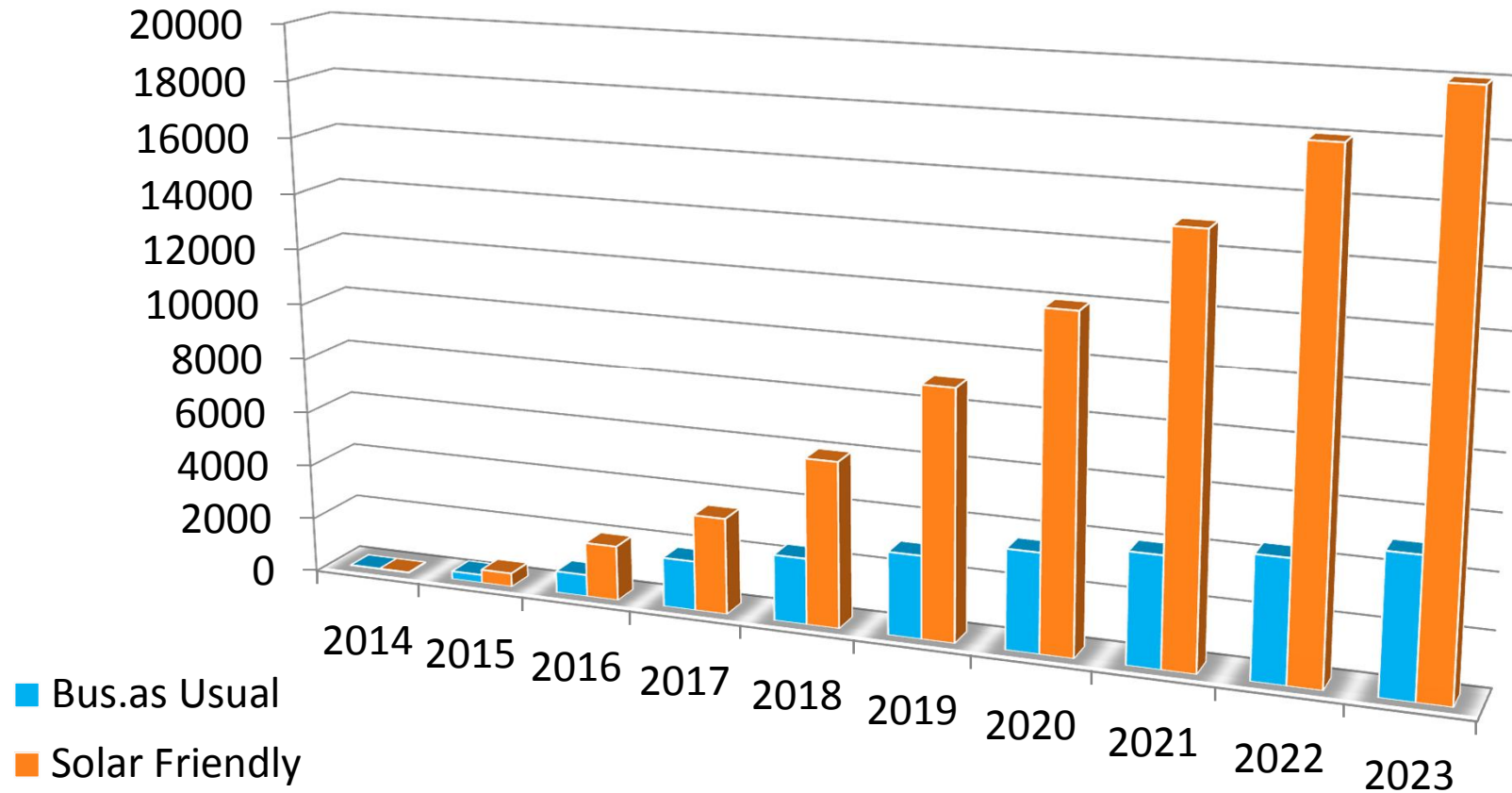
Unlicenced

- **Construction Permits (Imar): is it necessary or a must? It takes more than 1 year in some cities + very costly**
- **TEDAŞ queuing (time-lags should be shortened more)**
- **Wrong projects; site selection, connection terms,..**
- **Financing (small % of the projects are in the hands of real investors)**

Future Scenarios

- **Business as Usual**
 - Current drawbacks (internal & external)
 - Limited New Licences
 - Current licence bureaucracy (measurements, etc.) and delays in capacity announcements, high licence fees, financial difficulties (non-project funding)
 - Current off-licence bureaucracy.
 - **2023 Installed capacity: 5,000 MW (!):** 5,000 MW is the current off-licence capacity, which is not realistic!
- **Solar-friendly Approach**
 - New Licences (1,000 MW/year)
 - Energy Investment Zones (3,000 MW/each)
 - Easier Applications for small applications, Rooftops, agricultural use, industrial use, shopping malls, etc.
 - New regulations for PPA, better adoption of the local content table in the law.
 - Better financing conditions; project finance.
 - **2023 Installed capacity: 20,000 MW.**

Future Scenarios



- ❖ **Business as usual scenario is based on the «Turkish National Renewable Energy Action Plan» by the Ministry of Energy and Natural Resources, Dec.2014.**

Future Scenarios for Germany

Our current energy system, which is based on generating power from fossil fuel and nuclear sources, cannot survive in the long term. A variety of energy scenarios have been created for the coming decades, and they are increasingly incorporating the use of RE. The rapid expansion of PV witnessed in Germany, alongside the speed with which its costs have fallen, have already exceeded many of these studies' expectations. The long-term scenarios and strategies for increasing RE in Germany drawn up on behalf of the BMU [IFNE] are based on the assumption that around 53 GW of PV capacity shall be installed in the country by the end of 2020 (Figure 46). Assuming a utilization of 950 full load hours per year for these PV power plants, 50 TWh of solar power shall be generated in 2020.

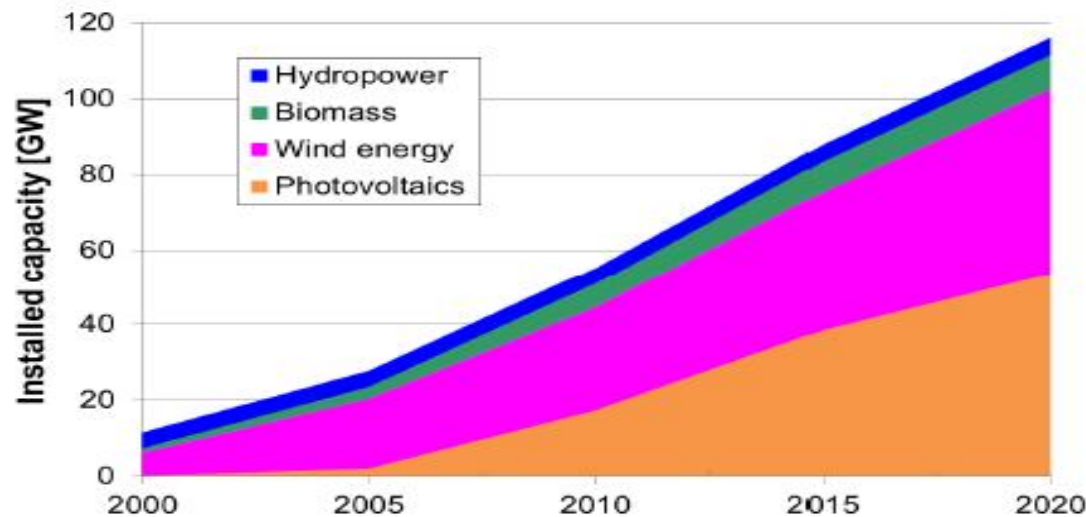


Figure 46: Scenario "2011 A" for the expansion of RE capacity, data from [IFNE].

- ❖ Recent Facts about Photovoltaics in Germany, Fraunhofer ISE, Jan.7, 2015.

CONCLUSIONS

- **The Solar Era in Turkey: Just Starting...**
- **New Policy Targets should be set: 20,000 MW Installed Solar Capacity by 2023. These should be associated with:**
 - **Financial Policies; New Supporting Mechanisms (Local content issue should work!)**
 - **New Laws and Regulations: Lift the current barriers, don't create new ones!**
 - **Research and Technology Policies**
 - **Dissemination of Knowledge; Education & Training. Lessons should be learned from successful countries (and others!).**
- **Stronger Political Support is expected from the next Government just after June 2015 elections!**

THANK YOU



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