



SolarPower
Europe

The Solar Manufacturing Accelerator and the future of the solar manufacturing industry

Presentation and discussion with ELTIA

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SolarPower Europe**

10th November, 2020

01

Present and future of the solar industry

02

The Solar Manufacturing Accelerator &
proposals for cooperation with
European long-term public investors

CONTENTS



Present and future of the solar industry



01

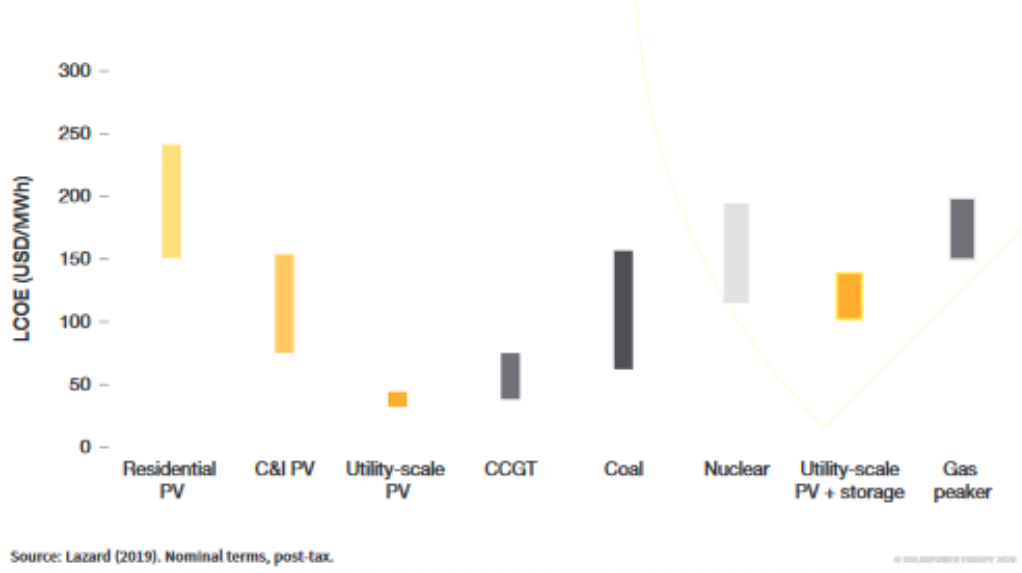


Perspectives on the European solar market (1/4)

Trends

*“With sharp **cost reductions** over the past decade, solar PV is consistently cheaper than new coal- or gas fired power plants in most countries, and solar projects now offer some of the lowest cost electricity ever seen.” IEA, World Energy Outlook, 2020*

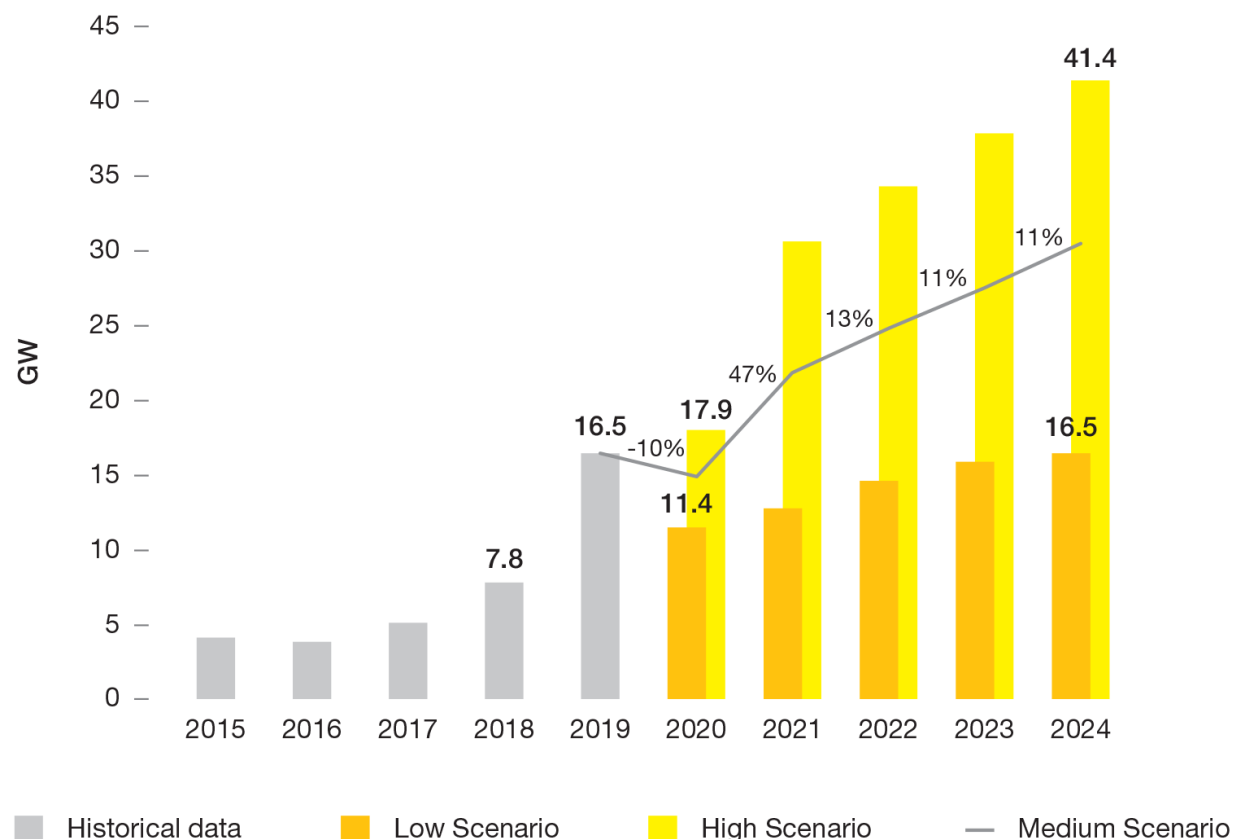
FIGURE 4 SOLAR ELECTRICITY GENERATION COST IN COMPARISON WITH CONVENTIONAL POWER SOURCES 2019



High scalability of solar on rooftops, building surfaces, water surfaces, agricultural installations...

Perspectives on the European solar market (2/4)

EU27 ANNUAL SOLAR PV MARKET SCENARIOS 2020 - 2024



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Solar has entered a new era of growth in Europe, despite the COVID crisis

Europe has installed **16.5 GW in 2019**, representing a +100% growth of the annual market from 2018.

The COVID-19 crisis has slowed down the market in the short term, but will not disturb the expect growth of the market in the medium term.

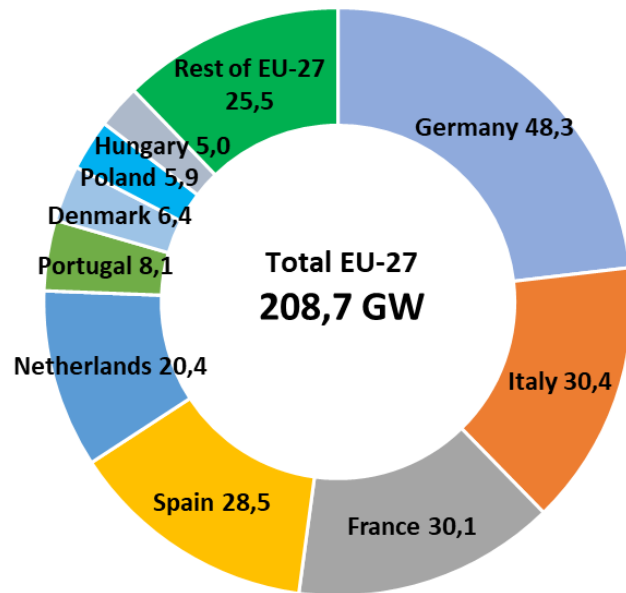
The annual market is set to **a double-digit growth** according to our forecasts.

Perspectives on the European solar market (3/4)

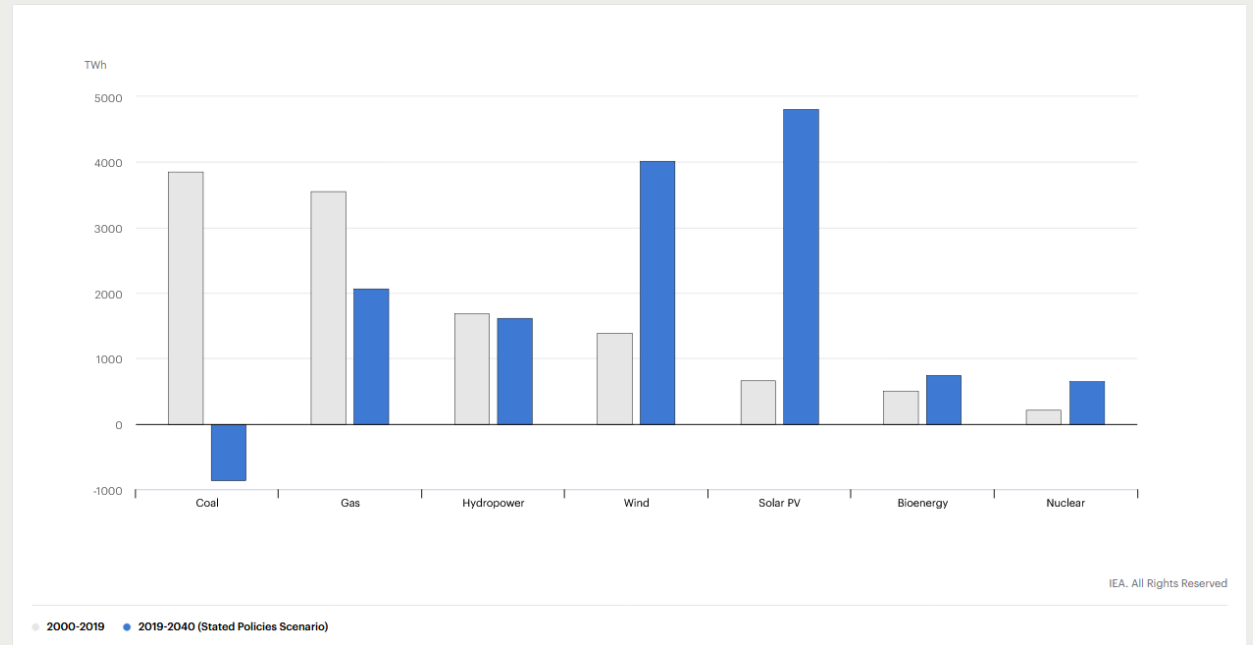
Solar will be the new “king” of the world’s electricity markets in the next years

The National Energy and Climate Plans pledge **209 GW of new PV capacity by 2030**, or 19 GW p.a between 2020 - 2030.

Net PV capacity additions through 2030 by country (GW)



Solar will be **the first electricity capacity installed in Europe** in the next five years according to Dr. Fatih Birol.



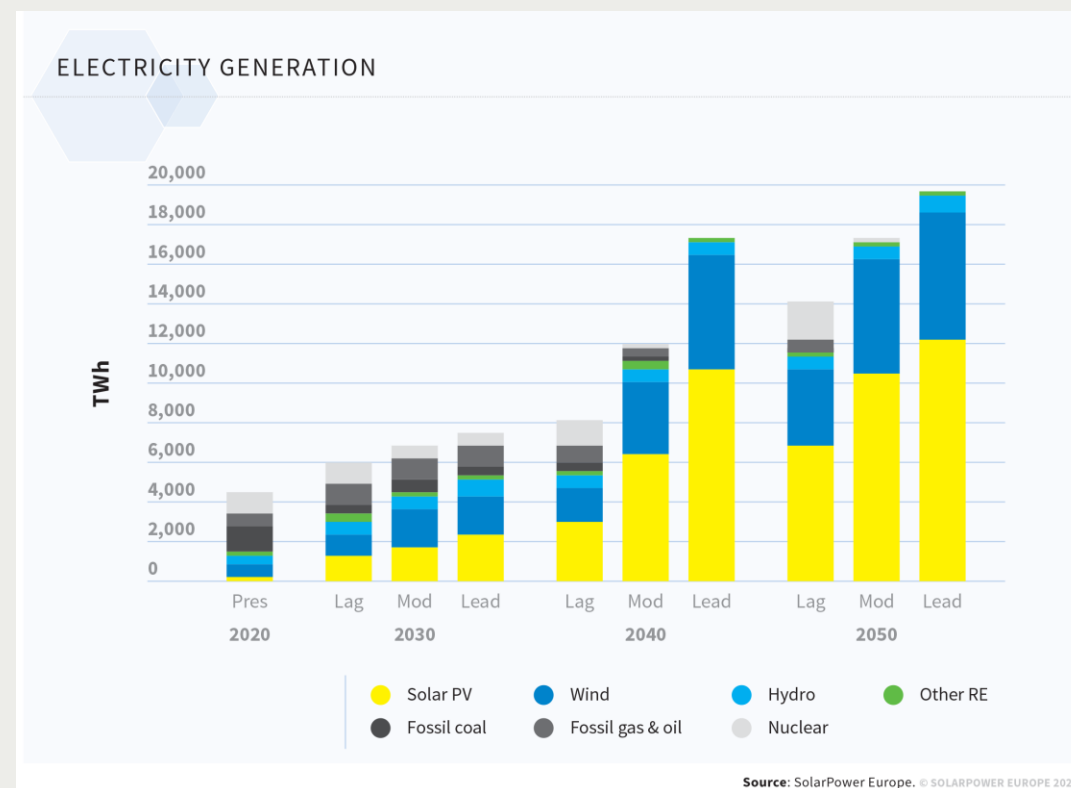
Perspectives on the European solar market (4/4)

In the long-term, solar will power Europe's energy system

A **100% renewable energy system is primarily a solar story**. As of 2040, solar PV becomes the dominant source of electricity generation across all three scenarios in Europe. By 2050, reaches at least 48% in the Laggard scenario and up to 63% in the Leadership scenario (SolarPower Europe 2050 study).

Most climate-neutrality studies (EC, BNEF, IEA) see **wind and solar** as key energy producers by 2040 / 2050.

This repositions solar as **a strategic energy technology** for the future of the European economy.

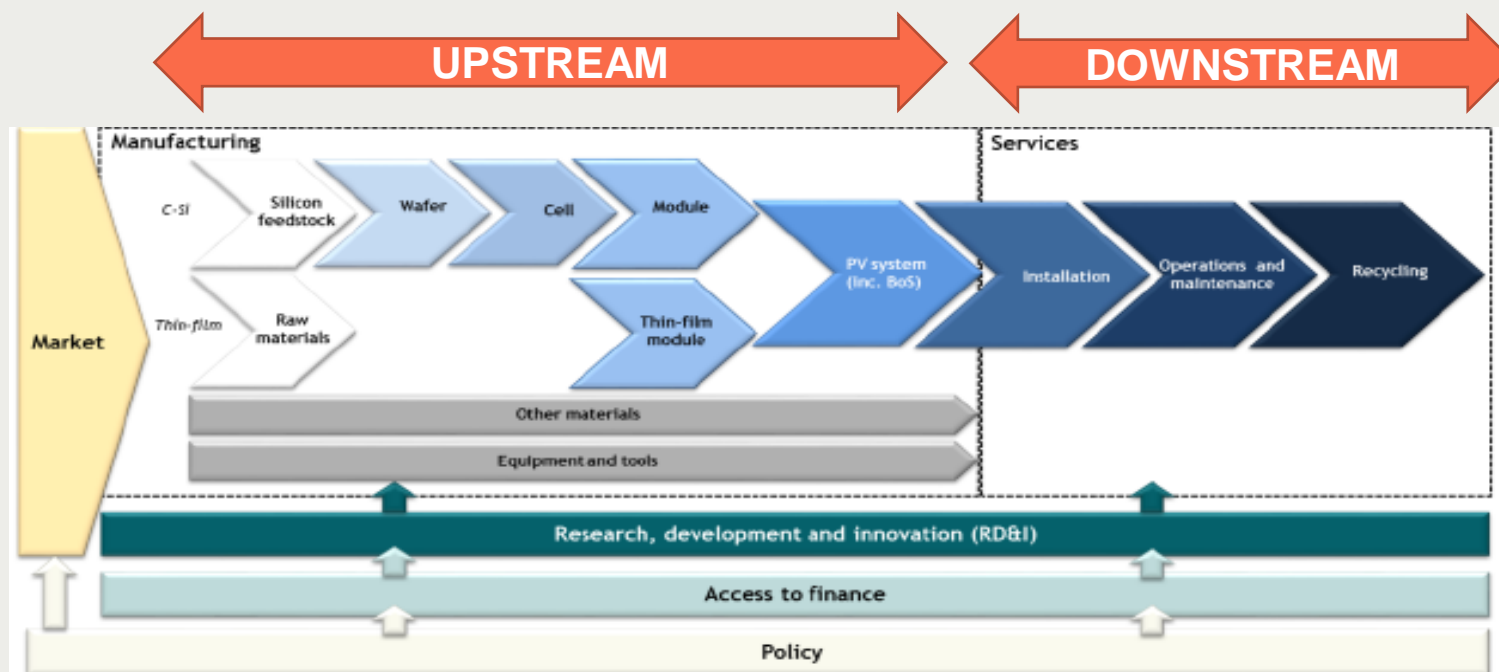


The solar industrial value chain in Europe (1/4)

100, 000+ direct & indirect jobs in 2018

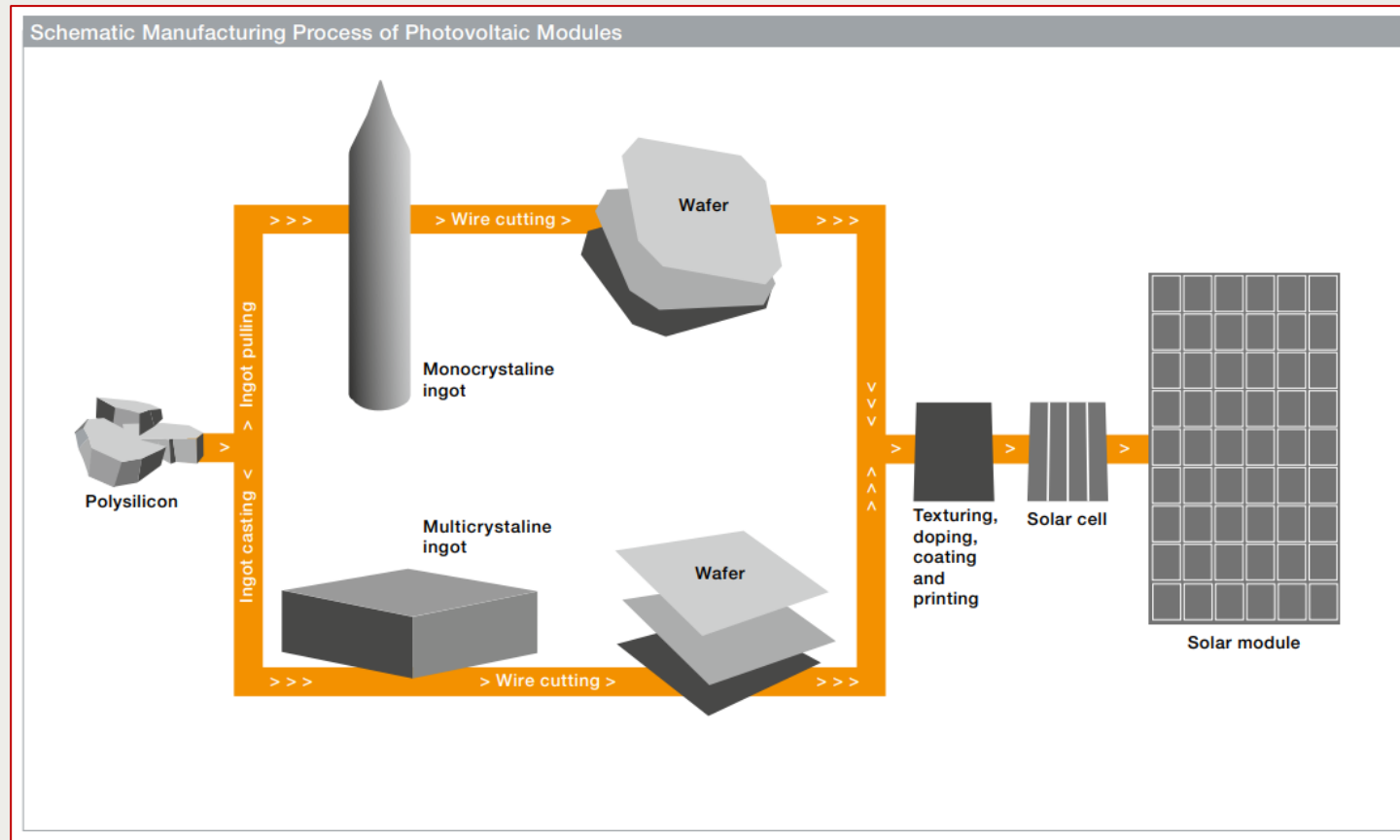
The downstream sector includes global leaders, with two European companies in the **top ten global project developers**

World leading **inverter manufacturers**: SMA, Fronius



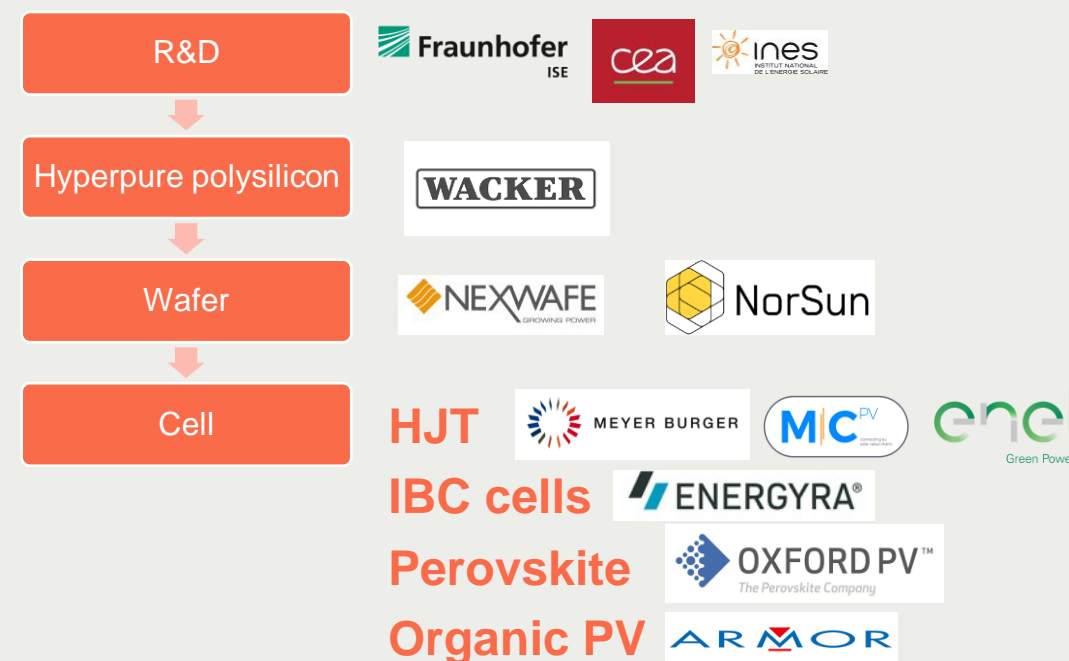
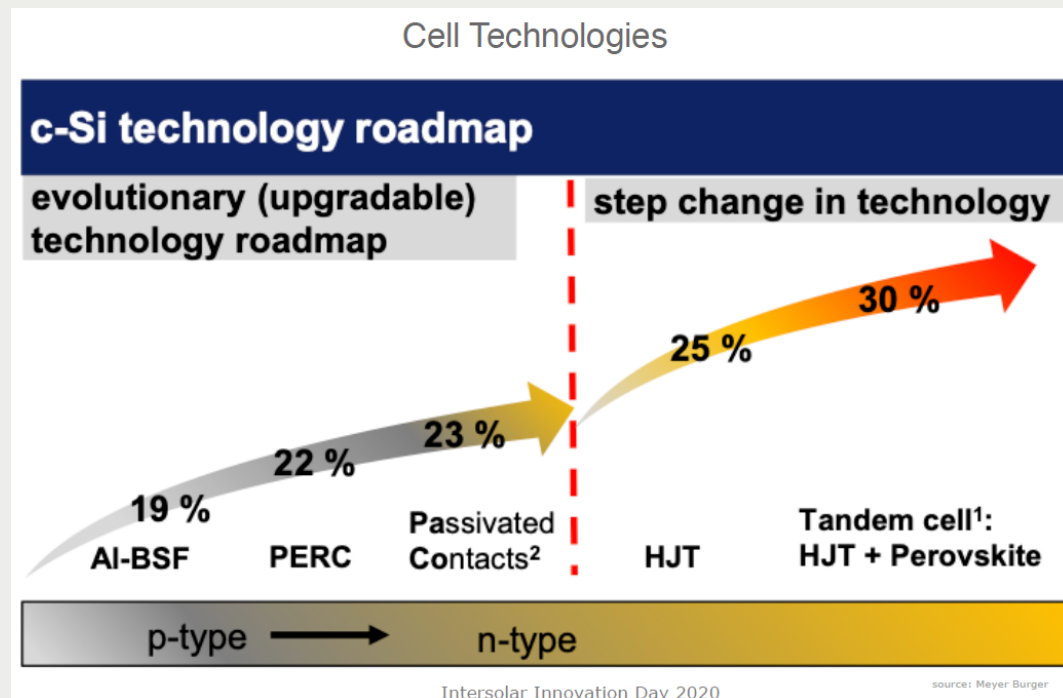
The solar industrial value chain in Europe (2/4)

The solar PV upstream value chain



The solar industrial value chain in Europe (3/4)

Europe is still an industrial leader in cells and module technologies



The solar industrial value chain in Europe (4/4)

A new wave of investment in the solar cells and module segment

Oxford PV secures £65 million in Series D funding round

Wednesday, 3 July 2019



Oxford PV perovskite-on-silicon solar cells in pilot production

Perovskite solar technology leader announces final close of its Series D funding round as it continues with plans to move to volume manufacturing



Media Release Thun, 10 July 2020



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Shareholders of Meyer Burger Technology Ltd approve capital increase

- The Extraordinary General Meeting of Shareholders of Meyer Burger Technology Ltd has approved an ordinary capital increase with planned gross proceeds of CHF 165 million 81.4 percent. A condition for the implementation of the capital increase is that gross proceeds of at least CHF 150 million are raised.
- The capital increase shall take the form of a combination of a rights offering to existing shareholders and a private placement to selected investors.
- The subscription period for the new shares is expected to begin on 14 July 2020 and end on 22 July 2020. Trading of the subscription rights on SIX Swiss Exchange is expected to begin on 14 July 2020 and to end on 20 July 2020.
- Meyer Burger Technology Ltd intends to use the funds from the capital increase to build up production capacities in Germany for technologically leading solar cells and solar modules. Production is scheduled to start in the first half of 2021 with 400 MW solar cells and 400 MW solar modules. An expansion to 5 GW is planned by 2026.

Zebra IBC cell with 24% efficiency moves to large-scale production

Netherlands based manufacturer Energyra this week introduced a new back contact module, which it has developed in partnership with Dutch research institute TNO and Germany's ISC Konstanz. A prototype module was unveiled yesterday in a small presentation at Energyra's factory in Zaandam, Netherlands. The company is targeting large-scale manufacturing by the end of 2020.

SEPTEMBER 4, 2020 **MARK HUTCHINS**

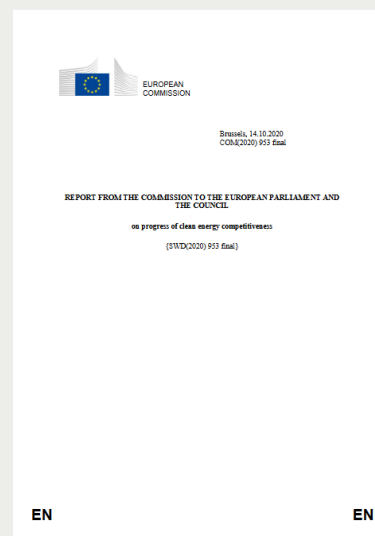
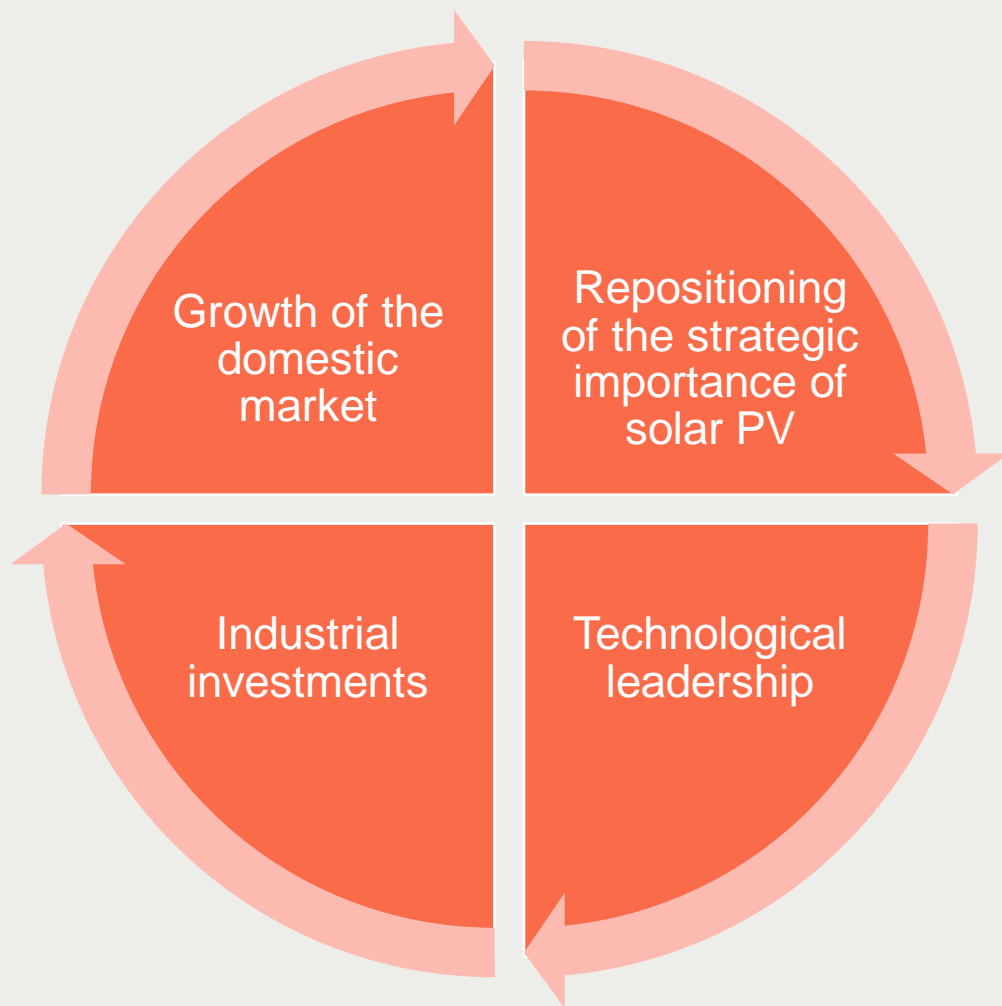
MANUFACTURING

MODULES & UPSTREAM MANUFACTURING

TECHNOLOGY AND R&D

NETHERLANDS

There is momentum for new industrial activities in Europe (1/2)



European Commission's Report on Clean Energy Competitiveness, 2020

- “Together with innovations in manufacturing, this should offer an opportunity for the EU to **take a fresh look at the PV manufacturing industry and reverse the situation**”
- “The strong knowledge of the EU research institutions, the skilled labour force, and the existing and emerging industry players provide **a basis for re-establishing a strong European photovoltaic supply chain**. To remain competitive, such industry needs to develop a global outreach. Building a sizeable EU P V manufacturing industry would also reduce the risk of supply disruptions and quality risks.”

There is momentum for new industrial activities in Europe (2/2)

“We will need **a more strategic approach** to renewable energy industries and the supply chain underpinning them”

European Commission, A New Industrial Strategy for Europe



“The Council (...) underlines the importance of preserving and enhancing value chains in the EU, including **renewables**”

Conclusions of the Energy Council on the response to the COVID-19 pandemic in the EU energy sector – road to recovery

“Europe’s “green recovery” will be based on **industrial leadership** in the production of batteries, electric vehicles, computers, **solar panels**, and wind turbines”

Joint letter ‘Open strategic autonomy’: A vision for Europe’s raw materials future



The Solar Manufacturing Accelerator

02



In May 2020, SolarPower Europe launches the



Solar Manufacturing Accelerator^{EU}

An initiative of



SolarPower Europe

Strategic partners



SolarPower Europe

A successful launch: presentation of 10 most mature PV projects during a High-level online conference on 8th July

Driving scale for Europe's solar industrial leadership



Andrew McDowell
Vice-President,
European Investment Bank



- 4 European Energy Ministers
- 2 leading Commission and Ministry representatives
- The Vice-President of the EIB

The Solar Manufacturing Accelerator Presents



3Sun Factory

3Sun is a solar cell/module factory located in Catania, Italy, producing heterojunction bifacial cells, one of the most efficient PV technologies, supported by H2020.

[More information](#)




5GW + Green Fab

The proposed 5GW+ Green Fab production capacities of modules aims to contribute to strengthening the solar industry in Europe as far as possible.

[More information](#)

10 project fiches
available on our
website



Solar Manufacturing Accelerator

The Solar Manufacturing Accelerator presents:

Meyer Burger

Project: Solar HET cell/module factory

Total investment: €110 million for the 1st step (400 MW)

Production capacity: 400 MW in 2021, later expansion to 5 GW

Jobs created: 2,500 direct jobs

Location: Germany

MEYER BURGER

A new innovation cycle is imminent in the solar industry, and the leading technology for next generation PV cells and modules is located right here in Europe, with Meyer Burger. The company's patent protected Heterojunction/SmartWire technology is more efficient than the current standard Mono-PERC, as well as other heterojunction technologies currently available. The higher energy output per unit area therefore offers lower costs for energy generation than most other available technologies.

Meyer Burger will develop a GW-scale European solar PV HET cell and module manufacturing project, based on the successful installation of a 400 MW production line. Meyer Burger will start by developing a 400 MW production capacity of 400 MW in 2021, before ramping up to a 5 GW-capacity. The modules are expected to be produced primarily for the attractive segment of rooftop systems, set to grow at +8% in the coming years. There are currently series of interest from potential customers across Europe and the USA to purchase over 2 GW per year.

More information: meyerburger.com

Contact: Anne Schwilke, Communications & Marketing, Meyer Burger

The Solar Manufacturing Accelerator activities

Stimulating the European solar PV value chain

- Creation of a database of European companies active in the solar value chain
- Organisation of B2B matchmaking events with offtakers



Supporting the access to finance

- Organisation of webinars with investors
- Development of an Investment Platform with EIT Innoenergy, replicating the successful model of the Battery Alliance



Solar Manufacturing Accelerator^{EU}

Supporting the development of projects

- Follow-up of the 10 leading projects
 - Watch of new industrial projects
- Regular update of a directory of on-going solar PV industrial projects, available to investors



Developing an enabling environment for solar manufacturers

- Creation of a Solar Industrial Roundtable with policy makers, investors, and offtakers



An European Solar Initiative

Proposal for cooperation activities with European long-term public investors

- Support **public investors**' access to information on the solar PV industry and to industrial project developers
- Stimulate the **private investors community** and raise awareness, through national-language webinars
- Cooperate in the framework of the future **European investment platform for solar**
- **etc.**

Thank you for your attention.

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