



GOPV

GLOBAL OPTIMIZATION OF INTEGRATED PHOTOVOLTAIC SYSTEM FOR LOW ELECTRICITY COST

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Main objectives

General/societal objectives

Reduction of the cost of PV electricity for increasing its competitiveness and its share in the European electricity mix
Creation of added value for European industrial players to be competitive on the global market

Techno-economic objectives

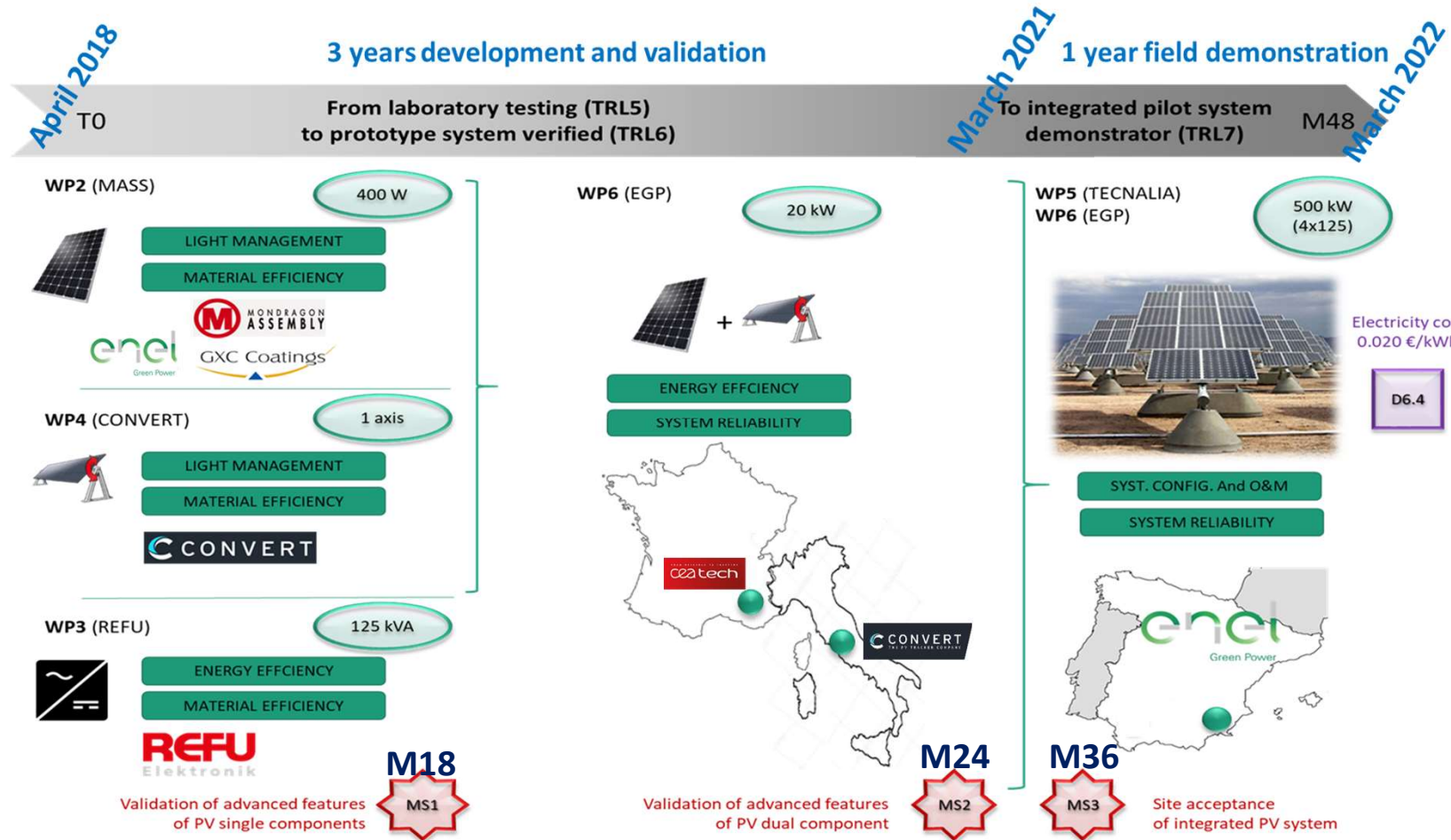
Higher efficiency, longer lifetime, lower cost components (module, tracker, inverter, O&M tools)

Specific expected impacts

1. Low Electricity Cost : Assessed value of LCOE = 20.9 €/MWh (in south Spain; ref = 37.8 €/MWh)
2. Reduced Energy Pay Back Time : Assessed value of EPBT = 0.73year (ref = 1.06 year)
3. Cost Effectiveness of Module recycling : Assessed revenue = 318 €/t; ref = 632 €/t (up-cycling process)



STEPWISE DEVELOPMENT UP TO LARGE SCALE DEMONSTRATOR



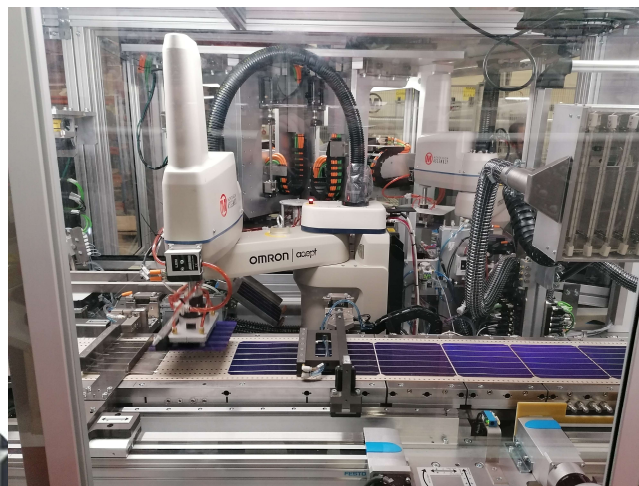


GOPV Module

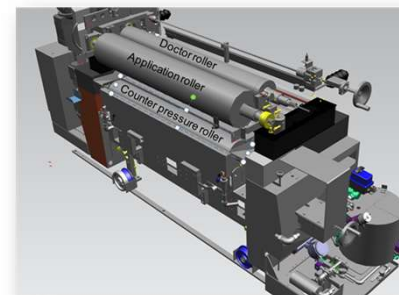
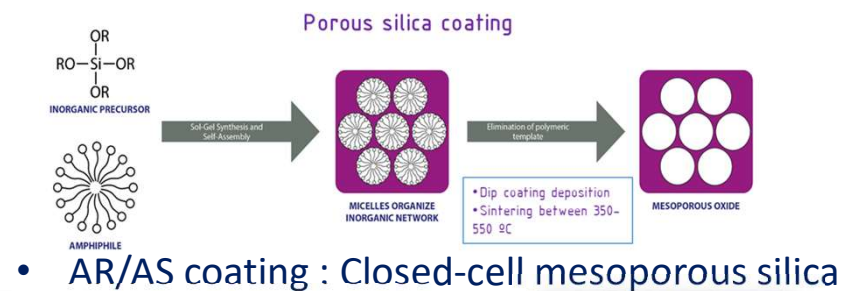


GOPV RESULTS

- Bifacial HJT module 72 cells layout (M2): 370W
- Cell thickness: 120 μm ; Ag per cell: 140 mg; 6 BB, upgradable to 8BB
- Cell interconnection by ECA technology
- ECA per half-cell: 30 mg (ribbon width: 0.8 mm)
- Industrial stringer prototype



GOPV Stringer



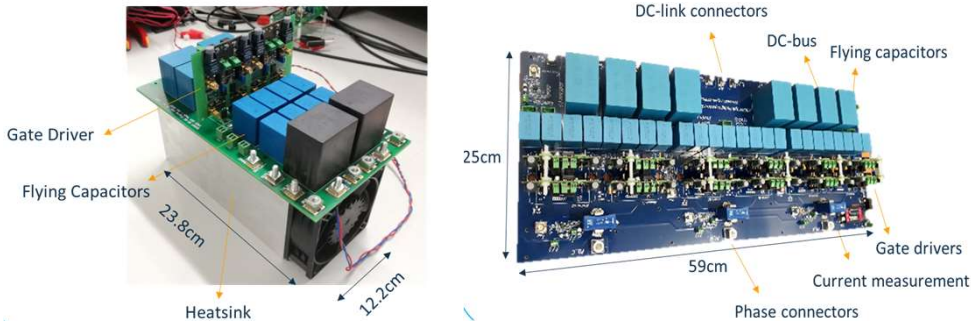
GOPV AR-AS coating





GOPV RESULTS

DC/DC Power Board / DC/AC Power Board



- 166 kVA string Inverter based on Flying Capacitor topology
- High compactness, high efficiency
- 8 MPPT , 16 strings 1500 VDC
- SiC power components

GOPV Inverter

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POWER ELECTRONICS BY EXPERIENCE
cea tech



- 2P 1-axis tracker (HSAT), 28 modules /tracker
- Tracker structure from Weathering Steel
- Module support from WS and/or GFRP
- Structural behaviour validated by wind tunnel tests

GOPV Tracker

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GOPV developments implementation

- **Major challenges/barriers for implementation**

GOPV brings developments and innovative solutions to European partners

Chinese competitors progress at an impressive pace (technical progress, investments in production capacities)

Position of European industrial players in the European, world markets

- **Communication strategy/opportunities in the coming year**

Industrial partners participation in trade fairs (Convert already very active)

Participations in international conferences

Training and workshops events organized by GOPV

Communications in specialised media

Presence in social media to reinforce



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Thank you for your attention!



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