



NELL – Novel Encapsulant for long Lifetime High Voltage resistant PV Modules - a SOLAR-ERA.NET project

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Success factor: team

- originally 3 partners and one sub-contractor from Spain and Germany
 - changed to 2 partners and 2 sub-contractors according to national demand
- simplified reporting (Germany)

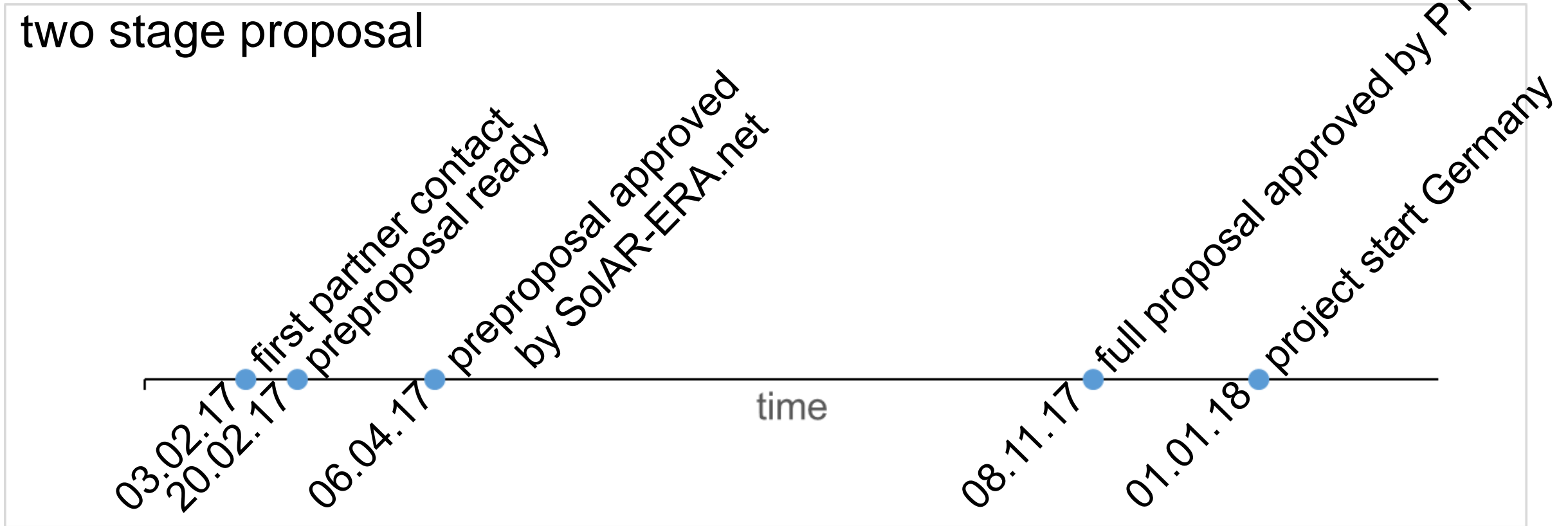


after merging



Success factor: very fast proposal procedure

two stage proposal



excellent support by national funding agency PTJ

Critical factor: different administrations

Differing project starts for the partners

- project start Germany: 1.1.2018
- delayed project start Spain: formal approval end of June 2018
for start in the past on 1.3.2018

Lessons learnt

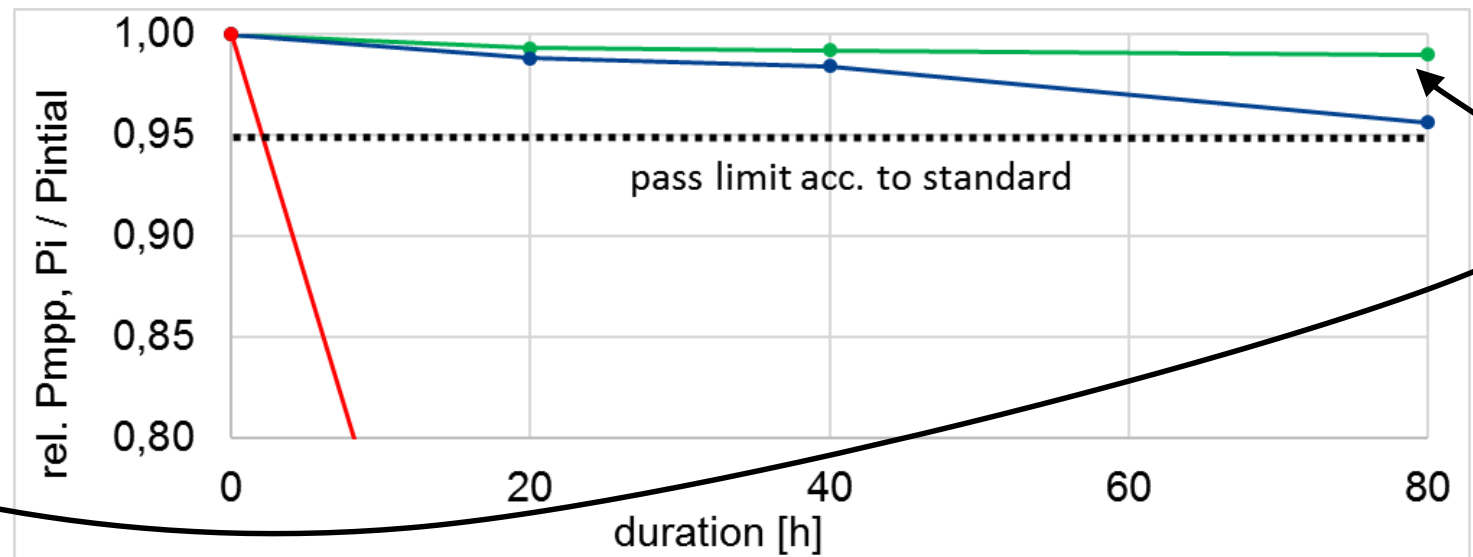
- Small consortia can be very effective and more flexible to cope with unforeseen events in contrast to big EU consortia
- Restrict the number of topics in your project

NELL contents

- Reduction of turn-key system cost by 20% enabling a real transition to 1500 V without increasing module components cost
- Development of a highly PID-resistant encapsulant
- Avoidance of PID even under harsh humidity and temperature conditions
- 30 years module lifetime
- life-cycle environmental impact, recyclability of encapsulant

NELL actual results

- c-Si modules with different PID sensitivity produced
- But: All modules **pass** PID test according to IEC 62804 !
- **NEW Method: Extremely accelerated** PID test
- different PID sensitivity becomes visible now
- **New material provides highest PID resistivity**



Further key topics: Façade integrated PV

- system topologies
 - maintenance strategies
 - Special demands of façade modules
 - module lifetime towards 40 years
 - European/national building regulations
- SEE WORKSHOP 2 BIPV

