Photovoltaic & Thermal: limited technologies

- ~20% yield
- 80% lost as heat
- Overheat during summer

Constant and diverse energy needs in our buildings

- 55%
- 23%
- 22%

In 2010, DualSun created the 1st Photovoltaic + Hot Water (PVT) certified hybrid solar panel in the world.
SPRING®: the hybrid solar panel by DualSun

- Easy to use
  - DualQuickFit®: Plug and Play system
  - Multilayer piping (vs. metal in solar thermal)
  - Compatible with many PV installation systems

- Limited maintenance
  - Low pressure circuit: 1.5 bar in the panel
  - Temp° 80°C = Limited maintenance (vs solar thermal)

- Hybrid solar panel Made in France
- DualHeat®: Only 1 panel to produce 2 energies, hot water and electricity
- 10 years warranty (product and labour costs) and 25 years for photovoltaic production
- DualBoost®: Increase of photovoltaic production thanks to the cooling of the pv cells

With SPRING®, up to 3 times more energy

Visually identical to the DualSun FLASH® Black photovoltaic panel

This Project has received funding from the European Union’s Horizon 2020 Research and Innovation Programme under Grant Agreement N. 818329
French manufacturer of solar panels

In 2020, DualSun is the world leader in PVT-Water hybrid technology.

Our goal: the energy autonomy of buildings

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Preheating domestic hot water

Example of installation (2019) : 19 appartments in Voreppe (FR-38)

- **Customer**: Alpes Isère Habitat (project ZERO PLUS)
- **Label**: PROMOTELEC Habitat basse Consommation BEPOS
- **Panels**: 20 DualSun Spring 310M insulated (6,2kWp) + 1000L storage
- **Thermal production thermique**: 8 287 kWh/year
- **Photovoltaic production**: 7 801 kWh/an
- **Turnkey price (solar installation)**: 35k€ or 1 060 €/m² or 1 842 €/appartment
- **Solar Cost of energy (hot water + electricity)**: 10,8c€/kWh on 20 year
Heat pump coupling for collective DHW

Example of installation (2017) : Highschool in Carquefou (FR-44)

- Panels : 90 DualSun Spring 280M non insulated (25,2kWp)
- Heat pump: 2 Solerpac HELIOPAC 12kW + storage 5000L
- DHW production : 59 502 kWh/year (+284 kWh/year backup)
- Photovoltaic production : 29 873 kWh/year
- Turnkey price (solar + HP): 163k€ or 1 100 €/m²
- Cost of the energy : 9c€/kWh on 20 years
- Installateur : Ets PINEAU
- Distributeur : HELIOPAC
Example of installation (2019) : Student house in Nijmegen (NL)

- **Customer**: SSH&
- **Panels**: 303 DualSun Spring 280M non insulated (84.8kWp) + storage of 10m³
- **GSHP**: Alpha Innotec 150kW
- **Thermal production (PVT+HP)**: 446 016 kWh/an
- **Photovoltaic production**: 77 200 kWh/year
- **Turnkey price (without GSHP and storage)**: 400k€ or 825 €/m²
SunHorizon pilots projects

Nuremberg collective housing

Verviers Swimming Pool

Riga Sunisi & Imanta houses

Madrid Appartments
Thank you for your attention!

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