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| TRAINING ASSETS | * Project-focused training allowing to go through the feasibility study of each trainer’s own micro-grid project * Concrete solutions to reduce fossil fuel consumption of one territory   Presentation of up-to-date technologies available on market, adapted to off-grid & insular areas. |
| OBJECTIVES | * Increase income and business-generating solarization opportunities * Gain knowledge on solarized resilience solutions in a pandemic context (productive use of PV, new energy economic sector) * Review basic grid and photovoltaic systems concepts * Learn to size the various system components according to specific needs * Understand sizing, monitoring and managing of micro-grids * Detail stability issues with centralised or decentralised micro-grids depending on renewables integration level et the control over selective power cuts and load management * Acquire knowledge on various insular PV applications such as solar mobility |
| AUDIENCE | * Energy offices : Policy and Decision-makers, energy department, planning services * Utility companies, local grid managers, production unit operators * Electrical contractors, design offices, project developers, renewable energy project managers * Technical training institute trainers |
| PREREQUISITES | * Strong basic knowledge on electricity and photovoltaic systems * Good knowledge of applicant own territory’s electricity production and distribution grid |
| TRAINERS | * Olivier VERDEIL - Solar Photovoltaic Expert – INES * Bruno GAIDDON – Solar Photovoltaic Expert - Hespul |
| TEACHING METHODS | * Lectures, feedback, study cases * Software practical sessions * Solar Installation presentation |
| VALIDATION | * Training certificate * Knowledge validation test |
| LENGTH | * 4 days - 28 hours |
| SCHEDULE | * 9h00 – 12h30 / 14h00 – 17h30 () |
| LOCATION | * TBC |

PROGRAMME

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| INTRODUCTION TO PV & MICRO-GRIDS IN SMALL ISLANDS  * Non-interconnected Zones systems * Grid fundamentals : various typologies of grids * Voltage ranges * Voltage and frequency tuning * Grid-code  SOLAR RESOURCE AND TECHNOLOGY COMPONENTS  * Solar resource * Basic knowledge on solar photovoltaic energy: daily production, yearly production * System architecture * Micro-grid components * Typologies of PV modules * Typologies of PV inverters * electrical energy storage solutions * Economic and environmental analysis - Costs of components and systems  SIZING & GRID MANAGEMENT  * Sizing equations * Comparison of software sizing tools – case-study demonstration * Integrated management of micro-grids * Energy management strategy (objectives cost / CO2 / etc.) * Uncertainties * Decentralization * Grid change | **SITE VISIT & CASE-STUDY** |