

## SOLAR BUSINESS MACAO



Is solar energy efficient in Macau? However, in the view of Macau-based scholar Wai Ming To, interviewed later in this special report,???Macau is a small city and has many high-rise buildings. Thus, solar energy is not efficientdue to the shadowing effect of adjacent buildings and the small ratio of rooftop area to total floor area.



Can Macao increase solar energy? The Macao government also sees an opportunity to increase solar energy. To encourage the installation of PV systems,officials passed a set of safety and installation regulations in 2015.



Does Macao have a photovoltaic energy contract? The regulations require investors to enter into a 20-year contract for the purchase of photovoltaic energy with Macao???s sole energy service provider,Companhia de Electricidade de Macau(CEM). Essentially CEM will purchase the electricity produced to ensure investors profit within a reasonable period.



Does offshore wind energy make sense in Macau? ???In our view, as external observers, offshore wind energy in Macau???s territorial waters makes sense, as does the development of distributed generation of photovoltaic energy. Macau has a lot of sun and many roofs. There is a potential to develop this vector in the medium-to-long term.???



How many photovoltaic interconnections have been completed in Macao? In response to a written inquiry from Macao News,the Environmental Bureau said that only five photovoltaic interconnectionswere completed by the end of March 2021. Meanwhile,the bureau received about 25 inquiries from local schools,industrial and commercial buildings and public utilities.



Is natural gas a problem in Macao? As a member of the Smart Energy Group of UM???s State Key Laboratory,which focuses on optimising clean energy use and production,Zhang believes expanding the use of natural gas poses major problems,especially in the city???s older districts.



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???Many buildings and [much of the]infrastructure in Macao are outdated.





Photo taken on Sept. 28, 2021 shows the work of a joint team from Southeast University, ETH Zurich and Sanming University for Solar Decathlon China in Zhangbei County, north China's Hebei Province. (Solar ???



In addition, thin-film solar cells can be attached to the surface of building walls for photoelectric conversion, and the photoelectric conversion efficiency can reach up to 22%. The high-rise commercial buildings in Macau ???



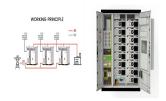
Macau (MNA) ??? The University of Macau (UM) announced this Friday it is selling solar energy-generated electricity to the Companhia de Electricidade de Macau (CEM).The university said its Department of Electrical ???



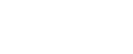
The reason for opting for solar energy is the unstable electricity supply and rising electricity bills, said Thida Tun and Chaik Sai, who have chosen solar energy for reliability and ???



"If we can install solar PV systems on only 20 per cent of these rooftops, we can reduce carbon emissions in Macao by 7 to 8 per cent," he says, adding that the sizable rooftops of integrated ???



14 ? Japan wants renewables to be its top power source by 2040 in a push to reduce dependence on coal and gas and become carbon neutral by mid-century, government plans ???





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To promote the use and development of green energy in Macao, the Department of Electrical and Computer Engineering under the University of Macau (UM) Faculty of Science and Technology (FST) and UM's Energy ???