

**Economics Legislation Committee**  
ANSWERS TO QUESTIONS ON NOTICE  
Industry, Innovation and Science Portfolio  
2016-17 Supplementary Budget Estimates  
20 October 2016

---

**AGENCY:** CSIRO

**TOPIC:** Solar investment

**REFERENCE:** Written Question – Senator Carr

**QUESTION No.:** SI-107

1. What involvement does CSIRO have in Solar PV research and innovation?
2. What is the CSIRO's level of investment in Solar PV and research
3. What is the level and source of external funding supporting CSIRO research in solar and other renewable technologies?

**ANSWER**

1. CSIRO conducts research and development into solar photovoltaic (Solar PV) technologies across the Energy and Manufacturing Business Units.

CSIRO Staff at the National Solar Energy Centre conduct research and innovation into reliable and independent photovoltaic measurement and assessment and development of next generation photovoltaic technologies. The Photovoltaic Performance Laboratory (PVPL), established with co-funding from the Australian Renewable Energy Agency (ARENA), provides measurement and consultancy services relating to the performance of photovoltaic (PV) solar cells and modules, from lab testing to assess product quality through to outdoor testing and assessing real world performance and durability. Further, CSIRO is innovating in the development of next generation photovoltaics with a research focus on emerging thin-film photovoltaics incorporating perovskite semiconductors. CSIRO researchers have developed a novel deposition process for perovskite thin-film fabrication that is suitable for large-area deposition and amenable to common glass manufacturing processes.

At CSIRO's Clayton Laboratories, researchers are innovating through the development of printed solar panels that are cheap, light-weight and flexible. These researchers are investigating materials and fabrication processes for reel-to-reel printable solar cells including perovskite and organic photovoltaic technologies.

2. CSIRO's appropriation investment into Solar PV research and development in 2016-2017 totals \$1.7 million.
3. External funding for CSIRO's Renewables research in 2016-2017 will be approximately \$10.5 million with \$1.4 million directed to Solar PV projects, \$3.2 million in co-invested Solar CST projects, \$0.3 million from the ARENA funded Australian Centre for Advanced Photovoltaics, and \$5.6 million for leadership of the \$87 million Australian Solar Thermal Research Initiative (ASTRI).