

IONSolv™ Silver Extraction Results

Advancing Solar Panel Recycling and Critical Minerals Opportunity

Highlights

- **IONSolv™ Performance Demonstrated:** Initial bench-scale laboratory testing achieved greater than 85% silver extraction efficiency under controlled conditions, establishing a strong baseline and confidence to progress the collaboration with Livium.
- **PV Application Advancing:** Testing on mechanically prepared end-of-life solar panel materials has commenced as the next phase of the solar recycling program, with feedstock preparation and panel dismantling support for photovoltaic ("PV") modules being provided by Livium Ltd, highlighting the importance of supply partnerships.
- **Growing Solar Waste Opportunity:** Australia's end-of-life solar panel waste stream is projected to increase substantially, with significant embedded value in recoverable materials such as silver and silicon.
- **Next Stage IONSolv™ Focus:** The solar panel program will advance work on recovery pathways for both silver and polysilicon as part of the Company's broader critical minerals processing strategy.
- **Market and Policy Tailwinds:** The development context is supported by emerging policy and industry analysis highlighting the need for scalable recycling solutions for photovoltaic waste in Australia.

Iondrive Limited (ASX: ION) ("Iondrive" or "the Company"), is pleased to provide an update on progress of its solar recycling initiative, including early laboratory results from its proprietary IONSolv™ metal extraction platform. Initial bench-scale laboratory screening has achieved greater than 85% silver extraction efficiency under controlled conditions, establishing a preliminary performance baseline to support further optimisation and application to end-of-life photovoltaic ("PV") materials, in collaboration with Livium Ltd ("Livium").

The laboratory work completed to date was undertaken as an early-stage screening and optimisation exercise designed to assess IONSolv™ formulation performance. The testing was conducted as discrete batch experiments under controlled conditions. This early optimisation work utilised small laboratory aliquots (10 to 100mg) of metallic silver to assess the IONSolv™ formulation's performance and to establish a preliminary extraction baseline. The initial results achieved have provided a solid baseline, as well as bolstered confidence in progressing the collaboration with Livium. Next steps will include trials on mechanically prepared end-of-life photovoltaic feedstock supplied by Livium.

These early results highlight the broader need for technology pathways capable of improving the recovery of high-value materials from end-of-life solar panels in Australia, where increasing volumes of photovoltaic waste are entering the waste stream, and where existing recycling approaches often result in down-cycling or disposal of valuable components.

Research indicates that a significant proportion of materials contained within photovoltaic panels — including silver and silicon — are not recovered under typical recycling practices, creating both environmental challenges and opportunities for improved resource recovery through targeted processing innovation.

londrive will now progress the next stage of its solar recycling program in collaboration with Livium, focusing on the application of the IONSolv™ platform to mechanically prepared photovoltaic materials. This phase of work will assess the interaction between feedstock preparation, mechanical separation, and chemical recovery pathways for silver and polysilicon fractions. Planned activities include laboratory optimisation, preliminary techno-economic assessment, and evaluation of recovery performance and scalability as the program advances toward larger-scale testing.

Strategic Collaboration with Livium

Progression of londrive's solar recycling initiative is supported by the Company's strategic collaboration with Livium, an Australian company focused on circular economy solutions across battery materials and recycling. Livium is providing feedstock preparation and panel dismantling capability to support testing on representative end-of-life photovoltaic materials and to inform assessment of how laboratory outcomes may translate beyond controlled conditions.

This collaboration enables londrive to evaluate the integration of mechanical preparation and chemical recovery processes within a broader recycling workflow and supports the development of scalable solutions for Australia's growing solar panel waste stream.

Solar Panel Recycling in Australia

The volume of end-of-life solar panels in Australia is increasing rapidly as installations from the early 2000's approach the end of typical design lifespans (approximately 25-30 years^{1,2}). However, the absence of scalable recovery pathways for high-value materials such as silver and silicon remains a key constraint within current recycling systems. Industry research shows solar panel waste in Australia could reach hundreds of thousands of tonnes annually by 2030³, with a substantial proportion of embedded materials not currently captured under existing recycling systems.

Under typical recycling practices, only a small fraction of panel materials – predominantly aluminium framing and junction boxes – are recovered, with the remainder either down-cycled or ending up in landfill due to technological and economic barriers.

londrive's solar program seeks to address this challenge by focusing on high-value recoveries early in the typical recycling process, with silver and high-grade silicon representing two of the most economically attractive commodity streams within photovoltaic waste.

The next phase of work will prioritise advancing recovery pathways for both silver and polysilicon, supported by ongoing laboratory optimisation, techno-economic assessment, and collaboration with strategic supply partners.

¹ Deng, R. et al. (2024) – “Scoping Study: Solar Panel End-of-Life Management in Australia” (<https://apvi.org.au/scoping-study-solar-panel-end-of-life-management-in-australia/>)

² Clean Energy Council (2026) – <https://cleanenergycouncil.org.au/for-consumers/fact-sheets/environment-and-planning-get-the-facts/environmental-impacts-renewable-energy/solar-panels-toxicity-myth-d80880e52ed26938e65f99b1bb989947>

³ Australian Energy council (2025) – <https://www.energycouncil.com.au/analysis/australia-s-solar-waste-a-growing-problem/>

Further updates on the solar panel program will be provided as work progresses.

This announcement has been approved for release by the Board of Directors

Further Information & Investor Relations

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About londrive

londrive is developing IONSolv™, an innovative metal extraction platform for the selective recovery of critical minerals. The technology operates at low temperatures, avoids aggressive acids, and uses tuneable chemistry to enable efficient, closed-loop extraction across a range of feedstocks. While initial deployment is in battery materials, IONSolv™ is designed for broader application in mineral processing and urban mining of e-waste.