

# REPORT ON COLLECTIVE PURCHASE CAMPAIGNS DEVELOPED IN LITHUANIA, THE SUCCESSES AND THE LEARNINGS

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# ABOUT CLEAR-X

Consumers Leading the EU's Energy Ambition Response, Expansion (CLEAR-X) is an ambitious extension of a tried-and-tested methodology, designed and developed to address consumers' needs thus **enabling consumers to lead the energy transition by investing in renewable energy sources (RES) and energy efficient (EE) technologies**.

The project cover some of the **countries** where financial, administrative/regulatory and technical barriers were most often perceived by the consumers during their journey to RES technologies.

These countries, Bulgaria, Cyprus, Lithuania, North Macedonia, Slovakia & Slovenia, were therefore selected for the potential impact of introducing collective purchase schemes, geographic diversity compared with similar past projects, and the presence of suitable consumer organisations.



## There are four specific objectives:

- Reliable information on RES and EE technologies suitable for consumer's homes is available
- Consumers collectively invest in suitable RES technologies through trusted schemes
- Consumers receive relevant information and advice on RES and EE technologies
- Regulatory frameworks facilitate consumers' adoption of RES and EE technologies and relevant market offers

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## CAMPAIGN SPECIFICATION

<b>Product</b>	<b>Solar parks (distant solar PV)</b>
<b>Campaign Calendar</b>	<b>Registration:</b> 26 November 2022 – 31 October 2023 <b>Offer:</b> 3 July 2023 – 31 October 2023
<b>Campaign Landing Page Link</b>	<a href="https://www.SoleMio.lt">https://www.SoleMio.lt</a>

<b>Product</b>	<b>Rooftop solar PV</b>
<b>Campaign Calendar</b>	<b>Registration:</b> 16 May 2023 – 31 October 2023 <b>Offer:</b> 3 July 2023 – 31 October 2023
<b>Campaign Landing Page Link</b>	<a href="https://www.SoleMio.lt">https://www.SoleMio.lt</a>

Two campaigns – for solar parks and for rooftop PVs – partially overlapped and eventually merged into one. This meant also that the audience for both campaigns also overlapped, creating certain opportunities but also some challenges.

## MARKET RESEARCH ANALYSIS

The LCA conducted a detailed analysis of the Lithuanian PV market and the networks of PV suppliers before launching the first collective purchase campaign (CPC) in November 2022. This campaign was both the first of its kind in Lithuania and a pioneering effort for the LCA.

The Market Research Analysis for photovoltaics (PV) in Lithuania involved the following activities:

Initially, we conducted a thorough examination of eparkai.lt, the leading platform for solar park sales, analysing existing offers and historical data from past offers. This allowed us to compile a comprehensive list of solar panels used in solar parks since the platform's inception in 2019, coinciding with the growth of the Lithuanian prosumer scheme due to the favorable legislative conditions.

Additionally, we engaged with prominent stakeholders in the field, including the leadership of the Lithuanian Solar Energy Association (LSEA) and representatives from the BOD Group. The LSEA primarily represents importers of PV equipment and local installers, while the BOD Group is involved in local PV panel production with a manufacturing capacity of nearly 200 MW per year in Vilnius. Given the post-Covid landscape and the persistent risk of supply chain disruptions, we opted to include both imported (mainly China-made) and locally produced PV panels in our analysis.

Furthermore, we conducted discussions with rooftop PV installers to gain insights into the composition of their PV panel stocks. Simultaneously, we engaged with solar park developers to understand their procurement processes.

This multifaceted approach allowed us to gather comprehensive and nuanced information about the PV market in Lithuania and to identify a set of potential obstacles which could significantly impact the testing phase and a CPC calendar overall.



In contrast to solar rooftop PV, the construction of solar parks follows a well-structured planning process that occurs well in advance—often a year or more before reaching the client's offer stage. This meticulous planning includes evaluating grid connection capabilities, acquiring substantial land plots (several hectares or more), conducting thorough technical project preparation, and subsequently initiating the EPC (engineering, procurement, and construction) phase. The development of a typical 3-5 MW solar park entails a planning and construction period of 2-3 years.

Our potential suppliers outlined the timeline for solar park projects. For instance, if a solar park is intended for retail sale in 2023 or 2024, the land plot is typically purchased in 2022. Subsequently, meticulous documentation is organized, and specific solar panels are procured approximately three months before the actual commencement of construction. Developers of solar parks regularly adhere to this timeline, placing orders with Chinese PV panel manufacturers well in advance to secure the best possible prices.

Solar panel prices have been decreasing since the start of 2023, prompting developers to acknowledge that they would acquire solar panels for solar parks at the last feasible moment—employing a "just in time" approach for delivery to the construction site. While this strategy may have offered cost advantages, it introduced considerable uncertainty in LCA testing and planning processes.

On the other hand, rooftop PV installers demonstrated ample capacity to offer a diverse range of solar PV modules for installation. Their readiness and flexibility stand in contrast to the more intricate procurement processes associated with solar parks, allowing for greater adaptability in meeting project demands.

## PRODUCT TEST RESULTS

Building upon the information provided above, we conducted tests on a total of four models of PV panels. The initial set, comprising three models (two originating from China and one from Lithuania), was delivered to the lab in June 2022. Additionally, a supplementary set featuring one model was delivered to the lab in April 2023.

All tested models showed outstanding results. This outcome is not surprising given that the producers were chosen from Tier 1<sup>1</sup>. Moreover, there was a surprising [positive evaluation](#) from the Lab regarding the panels produced in Lithuania.

During testing, LCA collaborated extensively with consortium partners to minimise costs. For instance, the Slovak partner SOS compiled and provided us with a list of ICRT-tested PV panels that demonstrated satisfactory results in rooftop installation scenarios. LCA incorporated the models from this list into the tender description, securing assurances from installers that several models from the list would be available at the time of offering.

Following the test phase, all tested modules were deemed suitable for the offer phase.

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<sup>1</sup> <https://merxu.com/en/show/bloomberg-tier-1-ranking-the-key-to-choosing-high-quality-photovoltaic-modules-550/>



## NEGOTIATION

On 26 November 2022, LCA issued a launch press release to the media and actively engaged in publicising the campaign. We promoted the collective purchase campaign (CPC) to PV suppliers through various channels, including mass media, LCA's official website, Facebook, Google, and direct emails, with the goal of encouraging suppliers to prepare consumer offers. As a result, LCA received the first call from a solar park supplier on the 6<sup>th</sup> December.

Later in the same month, we extended an invitation to the Lithuanian Solar Energy Association (LSEA) to consider the proposal, urging them to submit offers and share our call for offers with all interested LSEA members (59 as of December 2022). The President of LSEA confirmed that the topic was discussed at LSEA meetings in January 2023, specifically on January 12 and January 24.

Following the detailed ICRT presentation on tested PV panels tested on the 15<sup>th</sup> of December 2022, a call for suppliers to participate in the tender was published on [LCA main website](#). The call included an acceptable PV panel listing, and the details can be found [here](#). As a result, LCA received two offers for solar parks: one from EVECON on 26 January 2023 and another from Solarbank (part of the BOD Group) on 14 February 2023.

A comprehensive comparison table was made to evaluate the two offers and calculate the benefits for consumers. Below we share the considerations made during the evaluation:

In favour of EVECON, the following factors played as beneficial to consumers:

- EVECON's declared portfolio of PV parks was considerably higher than Solarbank's, with 1.5 Gigawatts in the development pipeline for 2023-2024, compared to 8 Megawatts operational in the case of Solarbank.
- The expected completion date for EVECON's PV park was Summer 2023, considerably earlier than Solarbank's declared operational date in the 1st quarter of 2024, which did not coincide with the timeframe of the project's activity.
- The calculated price in EUR per 1 kWh per year for a 10-year operational cycle was 0.114 EUR/kWh/year for EVECON, compared to Solarbank's 0.133 EUR.
- EVECON offered an 8% additional discount for consumers opting for a 100% prepayment (approximately 100 EUR per kilowatt-peak (kWp) of installed capacity), while Solarbank did not offer a discount for prepayment.
- Maintenance cost for EVECON was 25 EUR incl. VAT per kWp, compared to 32 EUR in the case of Solarbank.

In favour of Solarbank, the following factors played as beneficial to consumers:

- Solarbank uses bifacial panels with trackers, resulting in a higher electricity output of 1,350 kilowatt-hours per year from each installed kilowatt of PV plants, compared to EVECON's 1100 kWh/kW.
- Solarbank requires a minimum engagement deposit of only 4%, whereas EVECON's deposit is 30%.



Both parks offered are built using bifacial solar PV modules. Solarbank intended to use **SoliTek Solid BIFACIAL B.60 370W** PV panels of Lithuanian origin, while EVECON identified **TrinaSolar Vertex 670W TSM-DE20 MBB/635~670W** panels as their choice.

The main selection criterion was understandably the cost incurred by the consumer for each kilowatt-hour (kWh) produced. Given that the quality of modules was comparable (refer to the "Product Test Results" section above), the cost of purchase, adjusted for the expected annual electricity output, played a decisive role in the selection process.

In case of Solarbank, it would have been extremely difficult to justify why consumers must pay 1,800 EUR per one kilowatt of power installed. During the negotiation phase, the prevailing competitive price level on the major solar PV parks platform eparkai.lt was approximately 1,400 EUR per kWp. EVECON initially reduced the price for their proposed park to 1,250 EUR in their first offer and subsequently decided to provide an additional 100 EUR discount. This immediately provided our clients with a price advantage!

Therefore, for the solar parks, LCA accepted EVECON's proposal and negotiated two options, considering different consumer preferences:

- The first option follows the traditional model of 30% prepayment (with the remaining 70% due upon the solar park's completion), offering a list price of 1,150 EUR per kWp.
- Simultaneously, a second option was made available to consumers less concerned about advance payment. Opting for a 100% prepayment would provide an additional discount, resulting in a final price of 1,033.60 EUR per kWp.

Both options were VAT inclusive and the offers were placed on the CPC landing page *SoleMio.lt*.

**ATIDŽIAI SUSIPAŽINKITE SU PASIŪLYMU  
IR PIRKIMO SĄLYGOMIS**

**ESMINĖ INFORMACIJA APIE SAULĖS PARKĄ**

- Visa parko leistinoji generuoti galia – 14 999kW
- Vartotojų aljanso kampanijos SOLEMIO dalyviams rezervuota galia – 2 000 kW
- Vieta: Jurbarko rajonas
- Sklypo plotas – 34 ha
- Planuojama gamyba – 1 100 kWh iš 1 kW per metus
- Planuojamas naudingas parko tarnavimo laikas – 30 metų
- „Trina Solar“ saulės modulių efektyvumo garantija po 25 metų – 84,75 proc.

Pagrindinės parko įrangos techninė specifikacija

**TIEKĖJO SIŪLOMA NUOLAIDA**

Derybų elgoje „Evecon“ pasiūlė net ketelį nuolaidų nuo rinkoje egzistuojančių kainų.  
Šiuo metu rinkos kaina už 1 kW saulės parko svyruoja nuo 1 299 EUR iki 1 399,99 EUR.  
Šaltinis: [www.eparkai.lt](http://www.eparkai.lt) (prieš 2023-06-28).

DEMESIO! Jums siūlėmi du variantai:

I variantas  
1 kW kaina  
**1 150 €**  
(su PVM)

Jei renkates po sutarties pasirašymo per nustatytą terminą sumokėti 30 proc. avansą, o likusią 70 proc. sumą pervesti „Evecon“ po elektrinės įrengimo.

II variantas  
1 kW kaina  
**1 033,60 €**  
(su PVM)

Jei renkates po sutarties pasirašymo per nustatytą terminą sumokėti iš karto visa suma.








For the rooftop solar CPC, reaching out to LSEA as a dissemination centre for installers proved to be successful. We received emails from three rooftop solar plant installers expressing strong interest in the campaign, along with an additional inquiry that, unfortunately, did not result in an offer.

We contacted representatives of these companies and invited them to engage in discussions through both phone and email. We inquired about their capability to install the modules selected by LCA (based on test results). The suppliers expressed reservations but assured us that they had some of the modules listed (compiled by SOS from Slovakia), though in somewhat limited quantities. Suppliers explained that newer and more advanced modules were already available in the market, suggesting that the modules we were inquiring about were somewhat outdated.

Despite facing some resistance from the suppliers, we maintained our insistence on installing the modules that had been tested for our CPC. To secure the use of the tested models in the installation process and ensure the quantities required for the project, we contracted all three suppliers. This decision aimed to guarantee that the potential interest from consumers would be fully met. While each supplier presented its pricing and additional conditions, achieving standardization across these conditions was not feasible. This was due to the unique requirements of each household, considering variations in heating, electricity, water systems, roof types, and electrical grid connection capabilities. For instance, a consumer with a tile roof might opt for one supplier over another, even if the "list price" is less favourable, based on a specific supplier's better offer for tile roofs.

In May 2023, to provide interested consumers in rooftop installations with maximum flexibility, we decided to launch the campaign with offers from all three suppliers. Throughout the campaign, one of the suppliers revised their prices, enhancing the overall benefits for consumers.

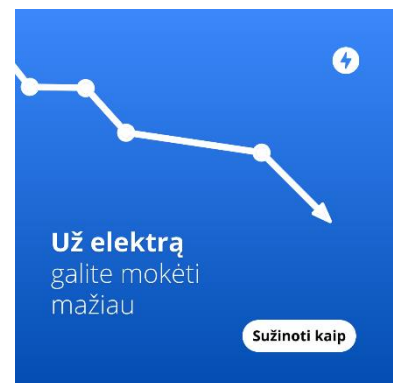
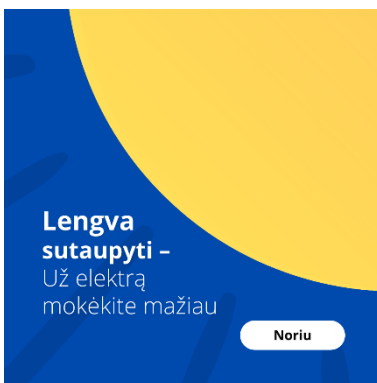
 <p>„Sonergy” – tai jauna profesionalių ir kompetingų specialistų komanda, kuri stengiasi kiekvienam klientui pasiūlyti didžiausią įmanomą vertę, įgyvendinant energetikos projektus.</p> <p><a href="https://sonergy.lt/saules-elektrines">https://sonergy.lt/saules-elektrines</a></p>	<p><b>„Sonergy” pasiūlymas</b></p> <ul style="list-style-type: none"> <li>✓ Pažadame sąžiningą kainą.</li> <li>✓ Įsipareigojame, kad „Sonergy” pelno marža nesudarys daugiau nei 10 proc. nuo bendros sąmatos (tiek elektrinės, tiek jos montavimo darbų).</li> </ul> <p><a href="#">Susipažinti su pasiūlymu</a></p>	<p>Orientacinė 1 kW kaina:</p> <p><b>664,00 €</b> (plius PVM)</p> <p>Ši kaina yra prieš pasinaudojant APVA parama.</p> <p><a href="#">GAUTI PASIŪLYMĄ</a></p>
 <p>Šiuo metu „Saulės graža” – viena iš pirmajųjų elektros energetikos įmonių Lietuvoje, ir jau 11 metų dirba, kad atsinaujinanti energija būtų naudojama gyventojų namuose ir įmonėse Lietuvoje bei užsienyje.</p> <p><a href="https://www.saulesgraza.lt/saules-elektrines">https://www.saulesgraza.lt/saules-elektrines</a></p>	<p><b>„Saulės graža” pasiūlymas</b></p> <ul style="list-style-type: none"> <li>✓ Perkant elektrinę, kurios galia iki 8 kW – nuolaida 200 EUR.</li> <li>✓ Perkant elektrinę, kurios galia virš 8 kW – nuolaida 400 EUR.</li> <li>✓ Jei elektrinė perkama be montavimo darbų, 5 proc. nuolaida sąmatai.</li> </ul> <p><a href="#">Susipažinti su pasiūlymu</a></p>	<p>Orientacinė 1 kW kaina:</p> <p><b>702,00 €</b> (plius PVM)</p> <p>Ši kaina yra prieš pasinaudojant APVA parama.</p> <p><a href="#">GAUTI PASIŪLYMĄ</a></p>
 <p>„ITP Solar” – įmonė, energetikos srityje veikianti daugiau nei 19 metų ir diegianti alternatyvius energijos sprendimus.</p> <p><a href="https://www.sauleselektrines.lt">https://www.sauleselektrines.lt</a></p>	<p><b>„ITP Solar” pasiūlymas</b></p> <ul style="list-style-type: none"> <li>✓ Siūlome fiksuotą sumą už 1 kW.</li> <li>✓ Įsipareigojame pritaikyti nuolaidą papildomiems darbams.</li> </ul> <p><a href="#">Susipažinti su pasiūlymu</a></p>	<p>Fiksuota 1 kW kaina:</p> <p><b>850,00 €</b> (plius PVM)</p> <p>Ši kaina yra prieš pasinaudojant APVA parama.</p> <p><a href="#">GAUTI PASIŪLYMĄ</a></p>





## CAMPAIGN CONTENT & PROMOTION

The most effective communication channel, as indicated by landing page statistics, was the use of social media. Eye-catching "teasing" banners served as an entry point to the CPC, directing users to SoleMio.lt, which acted as the landing page. Examples of various banners can be found below.



Texts in the blocks read, from left to right: "Easy to save – pay less for electricity. I want it >"; "3 steps towards cheaper electricity, 1-2-3, I want to know"; "You may pay less for electricity. Learn how".

The teasing format proved highly effective in attracting users to register. However, to increase consumer awareness, a complementary mass media public relations campaign played a crucial role. We produced radio broadcasts on the national broadcaster LRT.LT and news radio *Žinių radijas*, serving as "teasers" for the CPC.

Furthermore, a public event was organized, featuring a lecture on the advantages of solar energy and a subsequent presentation highlighting the benefits of participating in the collective purchase through LCA's CPC.

Additionally, we employed a digital tool developed as part of Work Package 4 activities. At the conclusion of the digital calculator for understanding the concrete solar energy benefits, consumers were presented with an option to subscribe to an LCA newsletter, providing updates on the launch of the CPC. Approximately 50 subscribers were gathered through this channel.

## CONCLUSION

The table below presents the initial goals (KPIs) versus the results achieved.

	Goal	Achievement
Engagement	10,000	872
Intentions	--	85 (solar parks)



Sales/Installations	500 in solar parks 500 rooftops solar	16 <sup>2</sup> in solar parks 15 <sup>3</sup> rooftop solar
Installed capacity, kWp	--	57.4
Average cost per installation	3,630€ <sup>4</sup>	5,696€ <sup>5</sup>
Page Visits	--	12,398

## Barriers

Three significant barriers have been identified, in part reflecting the risks that LCA recognised during the market research phase.

1. First, campaigns must be concluded quickly; the process cannot last months or even years. We approached many registered clients by phone in June 2023, in preparation for the offer phase that started in July 2023. LCA called consumers who had visited the page but did not finalize the registration process, reminding them of the opportunity to purchase a section of a solar park or to install PV panels on their roof. The outcomes from reaching out to 226 consumers directly were as follows:
  - 20% did not answer the phone.
  - 5% quit the conversation quickly after hearing the topic without explaining their reasons.
  - 16% stated they were no longer interested without providing a specific reason.
  - 10% mentioned they were no longer interested due to a lack of funds.
  - 5% cited other reasons for losing interest.
  - 20% mentioned they had purchased via other channels, likely because they registered early and had to wait too long before the offer was launched.
  - 24% were still interested in purchasing.

Given that 20% of the reference group respondents already bought a solar plant directly without a discount offered by LCA, it can be theoretically calculated that a joint benefit of 39 kEUR was lost. This calculation is based on the premise that 20% of N=226 is 45, times 3.5 kW average calculation size, times 250 EUR per kWp savings (market price compared to the EVECON proposal).

In short, our campaign was "buried" under other communication campaigns organized by dozens of providers at the same time. By the time LCA's offer was out, many consumers had already made purchases elsewhere.

<sup>2</sup> As LCA directly oversaw agreement signing process, this figure of 16 installations is 100 % final. We cannot account for any installations that occurred outside of the offer period, e.g. via the direct contact between the client and the solar park developer.

<sup>3</sup> These are the number of contacts between the client via the webpage and the installer. Final contracts (and installations) numbers are still pending for various reasons as indicated in the "Barriers" section, point 2.

<sup>4</sup> This average cost was determined based on national data available at the time of writing the project proposal in 2020.

<sup>5</sup> This average take into consideration the average cost for rooftop PV panels – 7,686€ (= offered price per kW (893€) \* the average rooftop size (8.6 kW)), and the average cost for solar park "slices" – 3,706€ (= total investments of 57,400€ / 16 "slices").



2. Only in August 2023, the State launched a new support round for remote solar plants (solar parks). Interest in purchases sharply increased, with several calls to our call center seeing a substantial rise, despite it being the summer season. We doubled our efforts to advertise CPC and attract more consumers to the campaign. Besides classical communication channels, we also reached out to non-traditional stakeholders, like rural communities. However, time was already lost, with the CPC calendar being out of sync with the state support calendar. Understandably, consumers' feedback shows that without financial state support, they are not interested in purchasing a RES product; they prefer to wait for the next round of support. For the smooth operation of future CPCs, we need constant and simple support measures from the Government. An approach based on short-term support rounds is not operational when combined with the project's strict calendar of CPC launches, although some extensions were granted to allow more time for additional installations.

Combining the two factors above, CPC should be launched flexibly, in concert with state support rounds. Placing CPC calendar factors above the realities of the market and the logic of consumer behaviour may result in a mismatch of expectations.

3. From a technical perspective, solar panel testing becomes less crucial when solar PV panels become a commodity. Models change too frequently, with a life cycle of a model lasting no longer than 6 to 9 months, given the highly competitive manufacturing environment where manufacturers strive to maximize wattage per module. Differences in test results for models are minuscule due to standardized and automated manufacturing processes among Tier 1 producers, who operate at a Gigawatt scale, adhere to strict standards, implement multiple quality controls, and offer 30-year warranties. In the installation process, the real issues lie in the quality of service, integrity of installation methods, and post-sale support, which have a more significant impact on consumer satisfaction than the quality of a single commoditized input like a solar module. Therefore, testing of solar panels for the Lithuanian CPC, especially for the solar parks, posed additional challenges due to the rapid evolution of the market. This factor contributed to delays in finalising the negotiation process and, consequently, the launch of the CPC offer.

