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SCB EIC

Tax Deduction for Solar Rooftop Installation Resonates with Consumers but Requires Supplementary Measures

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Tax Deduction for Solar Rooftop Installation Resonates with Consumers but Requires Supplementary Measures

KEY SUMMARY

On 24 June 2025, the Cabinet approved a tax deduction measure for the installation of solar rooftop systems in residential properties, with a maximum deductible amount of 200,000 baht. However, the measure will not take effect until it is officially published in the Royal Thai Government Gazette. Eligible applicants must be residential electricity users classified under Type 1 (household use) and must be income earners under Sections 40 (1)–(8) of the Revenue Code. The installed system must be an on-grid system connected to the electricity grid, with a maximum capacity of 10 kilowatts, and all required installation documentation must be complete. The measure aims to promote household investment in solar energy amid rising electricity costs and increasing public awareness of clean energy. Nevertheless, the measure will not come into force until it is announced in the Royal Thai Government Gazette. At present, the relevant authorities are in the process of finalizing the details, and no specific date has been set for its official implementation.

The tax deduction measure is expected to serve as an incentive that facilitates household decisions to install solar rooftop systems. Thailand possesses substantial potential for household-based solar rooftop electricity generation, with the Ministry of Energy indicating that in 2023, the total potential stood at approximately 121,000 megawatts. In contrast, the cumulative installed capacity as of 2022 was only 1,893 megawatts, or around 1.6% of the total potential, reflecting significant room for further growth in installations. A consumer survey conducted by SCB EIC in early 2025 revealed that 80% of the 2,257 respondents expressed interest in installing solar rooftop systems but had yet to make a decision, in part due to the relatively high installation costs. The tax deduction measure of 200,000 baht is therefore expected to help some consumers proceed with installation decisions, as it would reduce tax burdens by approximately 6,100–50,000 baht, providing an additional incentive for investment decisions. Moreover, this measure serves as a policy signal from the government, demonstrating its commitment to supporting clean energy adoption at the household level.

Although the tax deduction measure is an incentive that aligns with consumer interests, it is not the most desired form of government support. A survey by SCB EIC found that consumers place the highest priority on "installation subsidies," cited by 26% of respondents, followed by "tax deductions on installation expenses" at 20%. Additional support measures consumers wish to see include the liberalization of electricity sales (15%), the provision of solar rooftop systems at below-market prices (14%), the purchase of excess electricity at retail rates (13%), and the streamlining of installation permit procedures (12%). These findings indicate that consumers seek a comprehensive policy package encompassing cost reduction, system accessibility, and post-installation benefits.

Moreover, the tax deduction measure alone remains insufficient, as significant barriers continue to affect installation decisions. According to a survey conducted by SCB EIC, consumers face three primary obstacles in adopting solar rooftop systems. First, consumers encounter difficulties in verifying if service provider is trustworthy and verifying if the price offered by service provider is appropriate, with many unable to access clear and comparable information. Second, limitations in securing personal financing present a major constraint. Over 50% of current adopters use cash and personal funds for installation, reflecting the most significant barrier to financing solar rooftop systems and indicating the demand for accessible financing options among consumers. Third, the complexity of government permitting processes remains a deterrent, including interactions with relevant agencies, preparation of required documentation, and scheduling on-site inspections, all of which continue to hinder consumer decision-making.

SCB EIC has proposed three measures to enhance the effectiveness of government support for household solar rooftop installations. In the short term, it is recommended that the government prioritise at least three actions. First, the establishment of a voluntary certification program for equipment and installation service providers would assist consumers in selecting credible providers. Second, financial burdens should be alleviated through subsidy measures and the provision of low-interest loans in collaboration with financial institutions to improve consumer access to financing. Third, the permitting process should be simplified by establishing a one-stop service system for residential installations. In the longer term, the government could consider additional measures, such as liberalising electricity sales and implementing net-metering schemes to purchase excess electricity at retail prices, to accelerate the sustainable expansion of household solar energy adoption.

The private sector can play a critical role in advancing household solar rooftop installations, particularly in three key areas. First, enhancing the credibility of installation service providers is essential. This can be achieved by offering clear information and guidance on products and installation suitability, providing transparent pricing data, and ensuring warranties and after-sales services. These efforts would help reduce consumer decision-making barriers. Second, the development of accessible financing options is crucial. Collaboration between installation service providers and financial institutions to offer low-interest hire-purchase loans for solar rooftop installations would enable consumers with financial constraints to adopt these systems more easily. Third, installation service providers should offer permitting services on behalf of consumers where such services are not yet available, as many consumers continue to face difficulties navigating the permitting process themselves. Additionally, service providers could consider offering discounts on equipment and installation fees to further incentivize adoption. According to a consumer survey conducted by SCB EIC, discounts are among the key factors that would encourage consumers to install solar rooftop systems.

If all stakeholders work together in a systematic manner, Thailand will be able to unlock the potential of solar energy distributed across every rooftop and advance towards a genuinely clean energy system.

KEY POINTS

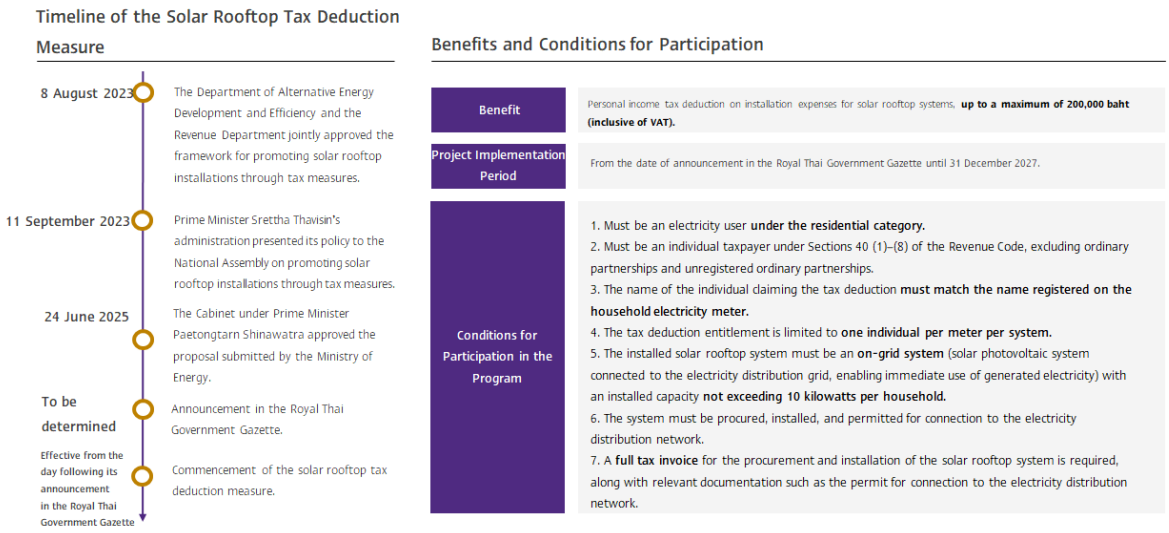
On 24 June 2025, the Cabinet approved a tax deduction measure for residential solar rooftop installations, with a maximum deductible amount of 200,000 baht. However, the measure will not take effect until it is announced in the Royal Thai Government Gazette, for which no specific implementation date has yet been set.

In recent years, the installation of solar rooftop systems has garnered increasing interest among consumers, particularly amid rising electricity prices and ongoing government signals supporting clean energy adoption. Most recently, on 24 June, the Cabinet approved a tax deduction measure for residential solar rooftop installations to encourage broader household adoption. Under this measure, **individual taxpayers** are permitted to deduct the actual expenses incurred for installing a solar rooftop system, **up to a maximum of 200,000 baht (inclusive of VAT)**. Eligibility conditions specify that claimants must be

classified as Type 1 electricity users (residential use) and must be income earners under Sections 40 (1)–(8) of the Revenue Code, excluding ordinary partnerships and unregistered ordinary partnerships.

The name of the individual claiming the tax deduction must correspond to the name registered on the electricity meter, and the deduction may be claimed by **only one person per meter per system.** The installed system must be an on-grid system connected to the distribution network, with an installed capacity **not exceeding 10 kilowatts**, and must be installed with the proper permits. **A full tax invoice** and documentation confirming the connection to the electricity grid are required. **The measure will be effective from the date of its announcement in the Royal Thai Government Gazette** until 31 December 2027. Currently, relevant agencies, including the Department of Alternative Energy Development and Efficiency, the Revenue Department, and the electricity authorities, are in the process of drafting the announcement, with no specific date for publication yet determined.

Figure 1: Cabinet Approves Tax Deduction for Solar Rooftop Installations, Capped at 200,000 Baht



Source: SCB EIC analysis based on data from Krungthep Turakij and Public Relations Department

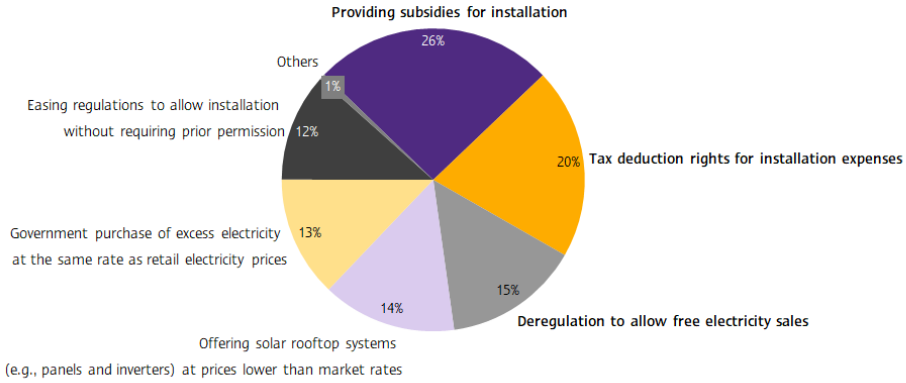
The tax deduction measure is expected to encourage greater adoption of solar rooftop installations among consumers by reducing the upfront installation cost burden. Thailand possesses substantial potential for household-based solar rooftop electricity generation, with the Ministry of Energy estimating a total potential of approximately 121,000 megawatts in 2023. In comparison, the cumulative installed capacity in 2022 stood at only 1,893 megawatts, representing around 1.6% of total potential, indicating significant room for further growth. A consumer survey conducted by SCB EIC in early 2025, covering 2,257 respondents, found that 80% expressed interest in installing solar rooftop systems but had yet to make a decision, partly due to the high installation costs. The tax deduction measure, set at 200,000 baht, is expected to facilitate consumer decisions by reducing the tax burden by approximately 6,100 to 50,000 baht, depending on each individual's tax bracket. Additionally, the tax deduction measure serves as a "**positive signal**" from the government, demonstrating its commitment to supporting clean energy adoption at the household level. This may also pave the way for additional future measures, such as facilitating participation in electricity generation programs that allow households to sell surplus electricity back to the grid.

Although the tax deduction measure aligns with consumer interests, it may not represent the form of government support most desired by the public. A consumer survey conducted by SCB EIC on government policies to support solar rooftop installation found that direct subsidies for installation were the most preferred form of government support, cited by 26% of respondents, followed by tax deductions on installation expenses at 20%. Additionally, consumers expressed a desire for government support in other areas, including the liberalization of electricity sales (15%), offering solar rooftop systems at prices below market rates (14%), purchasing surplus electricity at retail rates (13%), and allowing installations without requiring permits (12%). These findings reflect that consumers seek a "comprehensive policy package" encompassing cost reduction, system accessibility, and post-installation benefits.

Figure 2: Consumers Prefer Government Support in the Form of Installation Subsidies, Followed by Tax Deductions on Installation Expenses

Q: Which government policies do you think would most support the adoption of solar rooftops? (Select up to 3 choices)

Unit: % of responses from surveyed groups who have already installed and those interested but undecided (total respondents: 1,841)



Source: SCB EIC analysis based on data from SCB EIC Consumer Survey "Thai residental consumers' experiences with solar rooftop" conducted during 22 January – 13 February 2025

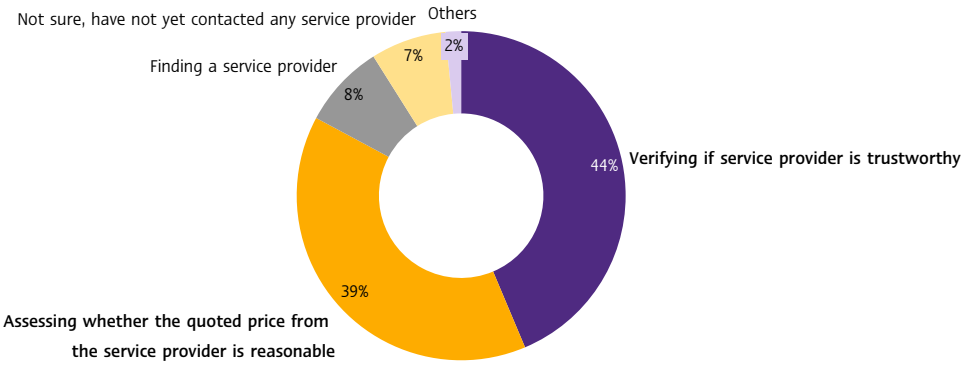
Moreover, tax measures alone may be insufficient to drive greater consumer adoption of solar rooftop installations, as consumers continue to face multiple barriers to installation. While the tax deduction measure provides an incentive, a consumer survey conducted by SCB EIC found that **consumers still face three key obstacles in deciding to install solar rooftop systems.**

1) Verifying the credibility of service providers and the appropriateness of the prices offered. A consumer survey conducted by SCB EIC on barriers to solar rooftop installation found that verifying the credibility or trustworthiness of installation service providers is a significant obstacle in selecting a provider, cited by 44% of respondents. This was followed by verifying whether the prices offered by providers are reasonable, noted by 39% of respondents.

Figure 3: Verifying the Credibility of Service Providers and the Reasonableness of Quoted Prices Constitutes a Major Barrier for Consumers in Selecting Solar Rooftop Installation Providers

Q: What is the most significant obstacle in choosing a solar rooftop installation service provider? (Select only one)

Unit: % of survey respondents (total respondents: 1,995)



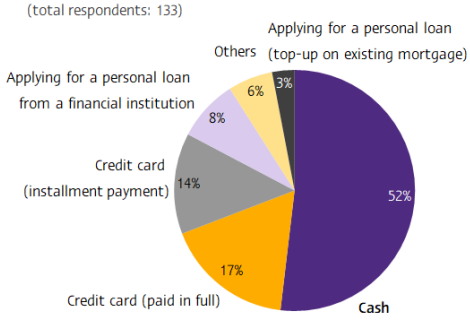
Source: SCB EIC analysis based on data from SCB EIC Consumer Survey "Thai residental consumers' experiences with solar rooftop" conducted during 22 January – 13 February 2025

2) **Access to financing for installation.** A survey on payment methods among consumers who have already installed solar rooftop systems found that 52% of respondents paid for installation using cash, while 17% used credit cards with full payment, and 14% used credit cards with installment payments. When asked about the primary obstacle in securing financing, 53% of respondents identified the difficulty in obtaining funds for installation costs as the main barrier. This reflects the limitations consumers face in accessing financing sources for solar rooftop installations.

Figure 4: Most Consumers Pay for Solar Rooftop Installations in Cash but Face Challenges in Securing Personal Funds for Installation Costs

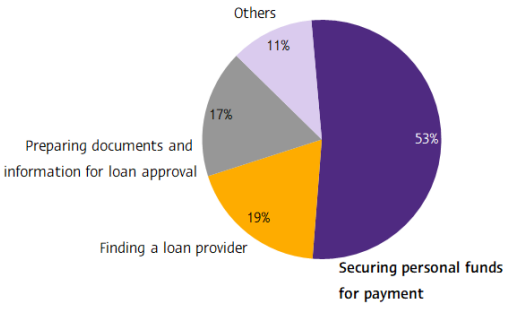
Q: Payment method for solar rooftop installation (Select only one)

Unit: % of surveyed respondents who have already installed (self-financed) (total respondents: 133)



Q: What is the most significant obstacle in seeking financing for solar rooftop installation?

Unit: % of surveyed respondents who have already installed (self-financed) (total respondents: 133)



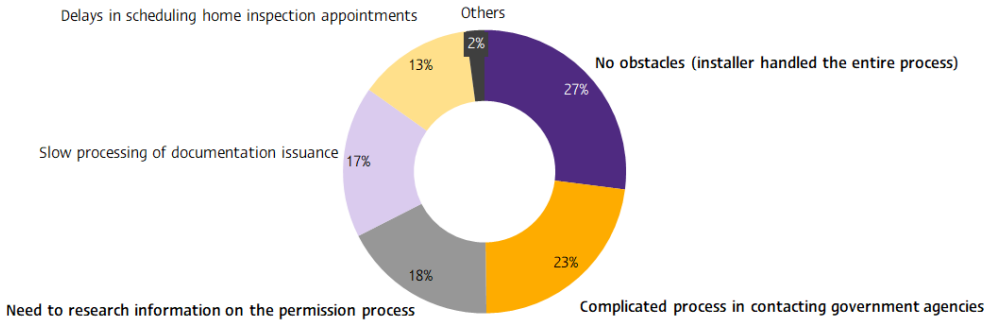
Source: SCB EIC analysis based on data from SCB EIC Consumer Survey "Thai residental consumers' experiences with solar rooftop" conducted during 22 January – 13 February 2025

3) The government permitting process is complex and cumbersome. When surveyed on the primary obstacles encountered during the solar rooftop installation permitting process, 27% of respondents who had already installed solar rooftop systems indicated that they faced no obstacles, as the installation providers handled the process on their behalf. However, 23% of respondents reported difficulties in communicating with government agencies. Other challenges cited included the need to research permit requirements, delays in document processing, and delays in scheduling home inspections.

Figure 5: The Permitting Process for Solar Rooftop Installation Is Complex and Cumbersome for Consumers

Q: What is the most significant obstacle in obtaining permission for solar rooftop installation? (Multiple selections allowed)

Unit: % of surveyed respondents who have already installed (self-financed) (total respondents: 136)



Source: SCB EIC analysis based on data from SCB EIC Consumer Survey "Thai residental consumers' experiences with solar rooftop" conducted during 22 January – 13 February 2025

SCB EIC has proposed three short-term supplementary measures for the government to further support the adoption of solar rooftop installations: 1) Establish a voluntary certification program to verify and approve the quality of solar rooftop equipment and installation service providers. This would enable consumers interested in installing solar rooftop systems to select providers from a government-vetted list that meets established standards for both quality and pricing. **2) Reduce the financial burden of installation** for households through measures such as providing installation subsidies and facilitating low-interest loans in collaboration with financial institutions. This approach aligns with consumer needs and would help alleviate financing barriers. **3) Eliminate obstacles in the permitting process and documentation requirements** by developing a one-stop service system for residential solar rooftop installations. This would reduce the cost and time associated with obtaining installation permits for both consumers and service providers. **In**

the longer term, the government may consider additional measures to address consumer needs, such as liberalising electricity sales and implementing net-metering schemes to allow the purchase of surplus electricity at retail rates.

At the same time, the private sector can play a role in advancing solar rooftop installations through action in three key areas.

1. **Enhancing the credibility of service providers** to address the significant barrier consumers face in selecting installation providers. Installation providers should demonstrate expertise and reliability in service quality, offer clear product and pricing information, provide warranties, and ensure after-sales service.
2. **Collaborating with financial institutions to offer financing options for consumers.** Survey findings indicate that most consumers pay for installations in cash and face challenges in securing funds for installation costs. Therefore, financial institutions and installation providers should jointly develop accessible financial solutions for consumers, such as low-interest hire-purchase loans for solar rooftop installations.
3. **Offering permitting services on behalf of consumers** to facilitate the installation process, as many consumers continue to encounter difficulties in securing installation permits themselves. Additionally, providers can stimulate demand by offering discounts on equipment and installation fees, as SCB EIC's consumer survey found that discounts are among the key factors encouraging consumers to adopt solar rooftop systems.

In summary, the personal income tax deduction measure for residential solar rooftop installations represents a significant step by the government in promoting clean energy adoption at the household level. It helps reduce the initial cost burden and sends a clear policy signal of the government's commitment to supporting the energy transition. The government must expedite the announcement in the Royal Thai Government Gazette to bring this tax measure into effect.

However, SCB EIC's survey indicates that tax measures alone are insufficient to drive widespread adoption if barriers related to the credibility/trustworthiness of service providers, access to financing, and the complexity of the permitting process are not addressed. Supplementary short-term measures, such as a voluntary certification system

for service providers, low-interest financing, subsidies, and a one-stop service permitting system, together with active private sector participation in providing information, competitive pricing, and financial solutions, will be critical in accelerating the adoption of solar rooftop systems as a core pathway for Thailand's clean energy transition.

If all stakeholders work together systematically, Thailand will be able to unlock the potential of solar energy distributed across every rooftop and advance towards a genuinely clean energy system.

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