

Value Added Tax Exemption Policy on Import of Solar Panel Machines in Indonesia

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Abstract:

The objective of this paper is to evaluate policy on Value Added Tax (VAT) incentives available to solar energy in Indonesia. The research method used is a qualitative approach. The data are collected based on documentary / library research, field research (observation & in-depth interview) and Focus Group Discussion. The problem of high prices of domestic solar panel components compared to imported products from China and Japan, is a major problem for the solar energy sector. Considering there is no VAT incentive on import and / or domestic delivery of the components of the solar panel raw materials. The Government only provides VAT exemption incentives on the import and / or domestic delivery of panel machinery through Government Regulation No. 81 of 2015. This incentive is less in demand by solar panel products. The research shows that it needs to establish the comprehensive framework of VAT regulation specific to solar energy industry. For practical aspect, the government also needs to formulate the implementation of the regulation as legal bases of VAT incentives with the clear scope, control mechanism and institution coordinating.

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I. INTRODUCTION

The pace of development has been accompanied by increased exploitation of natural resources, which has direct and indirect consequences for environmental and ecosystem damage. The more rapid economic growth is always followed by the addition of the contribution of emissions, especially carbon dioxide (CO₂) emissions. CO₂ produced from production and consumption activities is caused by the industrial sector still relying on fossil energy.

To meet electricity needs, Indonesia is also still dependent on fossil fuels such as coal, petroleum, and natural gas. The three energy sources are non-renewable, and the process produces CO₂, which is the largest source of greenhouse gas emissions. GHG emissions can

cause environmental pollution and climate change. In the long run, it can trigger higher emission contributions which are not calculated through the producer and consumer markets. In economic theory is an externality of production and consumption activities as a form of market failure.

Previously, the Government of Indonesia devised a National Action Plan on GHG Emission Reduction called the RAN-GRK and set up the GHG reduction to 26% in 2020 in each sector with national action of self-effort and to 41% reduction with international support. Under the Intended Nationally Determined Contribution (INDC), one of the points in the Paris Agreement agreed by 196 countries at the 2015 meeting, Indonesia decided to reduce carbon emissions to 29% in 2030.

It is time for Indonesia to utilize renewable energy, in addition to being able to reduce CO₂ gas emissions. Renewable energy can simultaneously meet energy demand, both locally and globally. The government then targets the use of renewable energy in 2025 to reach at least 23% of the total national energy mix contained in Government Regulation No. 79 of 2014 concerning National Energy Policy (GR 79/2014).

The development of environmentally friendly power generation infrastructure is a manifestation of the seventh point of Sustainable Development Goals (SDGs), namely ensuring that people have access to affordable, sustainable and modern energy (UN). In SDGs point 7.2, one of the targets that must be achieved by countries participating in the SDGs is to increase the distribution of new renewable energy in the global energy mix by 2030. This is done to ensure the use of renewable energy as energy that can reduce carbon emissions and can update.

Prioritizing the construction of new renewable energy power plants is done as a form of government response to the importance of energy security and carbon emission reduction. This is because the national energy mix is still dependent on environmentally unfriendly energy, which continues to run low and cannot be renewed.

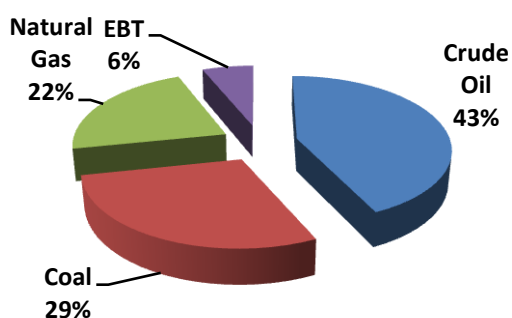


Figure 1 The Primary Energy Mix

Source: Statistik EBTKE year 2016

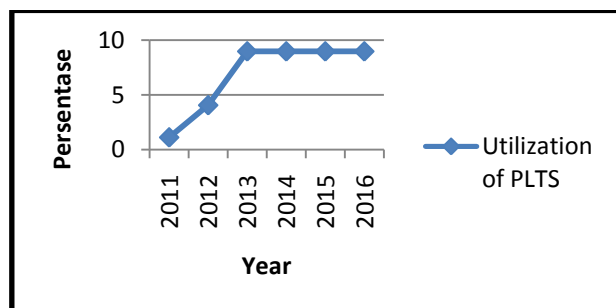
The primary energy mix is still dominated by petroleum by 43% and coal by 29%. Meanwhile, the percentage of renewable energy is very minimal at only 6%. Renewable energy is

unlimited energy and can be renewed to realize national energy security. Renewable energy is energy sourced from wind, water, sunlight, and geothermal energy (Sørensen, 2017).

In preparing the resilience of electricity reserves in Indonesia, the government has launched a 35,000 MegaWatt program. The project aims to build electricity infrastructure with a capacity of 35,000 MegaWatts with a transmission network of 46,000 km. This policy is outlined in Presidential Regulation No. 4 of 2016 concerning the Acceleration of Electricity Infrastructure Development. The EID development, which is prioritized in carrying out the 35,000 MegaWatt program, is EID renewables energy.

Renewable solar energy is produced by using silicon crystal panel plates which absorb sunlight energy and then convert it into electrical energy. These panels are commonly known as solar panels. The solar panel consists of several components, and the parts that form the core of the solar module circuit are silicon wafers. This component consists of several solar cells that determine the efficiency of the solar module in the process of producing renewable solar energy. These components will be assembled into machines so that the Solar Power Plant (Pembangkit Listrik Tenaga Surya/PLTS) can be used to produce electricity.

The use of PLTS electricity supply facilities by the State Electricity Company (Perusahaan Listrik Negara/PLN) for several years has not shown an increase. This is different from some other renewable energy sectors, such as geothermal. Growth in the use of PLTS as a means of supplying electricity by PLN can be seen in Graph 1.

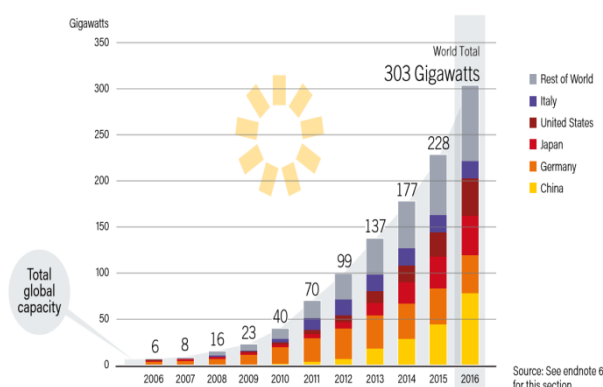


Graph 1 Use of PLTS as a Provider of Electric Power by PLN

Source: Electricity Statistics T. A. 2017

Graph 1 shows the stagnant state experienced by electricity supply from the solar renewable energy sector. The installed solar power plant capacity up to 2016 is 16.02 MW (Electricity Statistics for 2017). The PLTS capacity was the most significant increase over the past 6 (six) years after increasing capacity in 2012, which reached 9.02 MW. However, this capacity does not reflect the use of solar-powered electricity used by PLN to provide power.

Even though in recent years, solar renewable energy has experienced significant growth in the world. During 2016, there was at least an additional capacity of 75 GW worldwide. This is equivalent to the installation of 31,000 units of solar panels every hour. However, Indonesia is not included in the list of countries that are leading the growth in the use of solar renewable energy. Countries that dominate the growth of solar renewable energy utilization include China, Germany, Japan, and Italy.



Graph2 Global PV Energy Capacity by Country and Regional Year 2006-2016

Source: Renewables 2017 Global Status Report, 2017

The above conditions are contrary to the fact that the potential for solar renewable energy production in Indonesia is high. High rainfall throughout the year and close to the equator makes Indonesia a great potential to become the largest producer of solar energy in the world. The possibility of solar renewable energy in Indonesia is enormous, which is around 4.8 KWh / m² or equivalent to 112,000 GWp, but only 10 MWp has been used (Ministry of ESDM, 2017). This potential can increase the level of electrification in Indonesia, which is still being improved by the government.

The renewable energy production process requires sophisticated technological specifications. The impact of production costs is higher than the price of imported products. This has become one of the main factors of the small utilization of renewable energy in Indonesia, including the production of solar renewable energy.

In addition to advanced technology, another reason that PLTS is not widely used is the lack of domestic component supply. The process of producing solar-powered electricity involves several industries that form an industrial chain from upstream to downstream. The upstream sector is in the form of supplying raw materials such as silica sand. In the production process in the form of equipment supply, solar cell production, and wafers silicon and solar modules. Up to the downstream produces solar-powered electricity.

The presence of upstream industries that conduct component manufacturing in the country is still limited. Therefore, the production of PLTS components has not been able to meet domestic demand, which causes the component import transaction to continue to be carried out by solar energy producers.

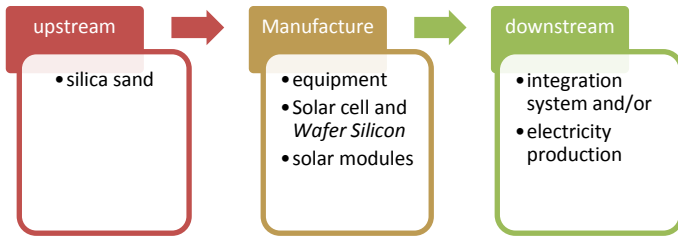


Figure 2 Global Supply Chains and Trade Preferences

Source: Meckling, Jonas danLlewelyn Hughes, 2017

Indonesia has an industry that can produce components with particular specifications for solar renewable energy. However, the solar renewable energy industry is too small to make these component manufacturers do mass production. The materials used also have similarities with raw materials for other industrial components, making it difficult to classify. The limited number of upstream industries from generator engine components makes the import needs of PLTS even higher. This is inversely proportional to the fact that Indonesia has a potential source of silica sand in some regions, such as Central Kalimantan. Silica sand reserves in the area reached 193,549,000 tons, but in 2010 Indonesia also imported quartz sand around 180,000 tons. Silica sand producers in Indonesia still export the sand in a rare condition at a relatively low price when compared to the cost of solar cells. Silica sand is the primary raw material in producing solar cells that will be made into silicon wafers. However, these components do not yet have domestic producers that can meet the demand for PLTS.

Renewable solar energy is environmentally friendly energy produced from solar energy. The energy requires sophisticated technology and specific components in creating it. Industries related to renewable solar energy are divided into two, namely the core industry and supporting industries. The core industry is an industry that

generates solar electricity. The form of the core industry can be in the form of large or medium scale generators. Meanwhile, the supporting industry is an upstream industry that produces components used by power plants (PLTS). This industry can range from silicon wafer producers to solar panel machine assembly manufacturers.

Domestic producers have the ability to produce these components. However, the small renewable solar energy market condition in Indonesia reduces the attractiveness of business in the component sector. This is why domestic solar panel machine manufacturers do not produce solar modules from the available raw materials. The producer will import 60% of the engine parts and assemble. The solar panel machine that has been constructed is then used by PLTS to produce solar-powered electricity.

The production process of solar panel machines that still rely on parts imported from abroad makes domestic products more expensive than imported solar panel machines. Solar panel machines imported from countries such as China have been mass-produced so that they can be imported at lower prices. This makes the renewable solar energy industry players prefer to import solar panel machines compared to utilizing domestic production whose prices are not yet economical.

Solar panel producers are industries that produce strategic goods such as electricity. To encourage the growth of renewable solar energy production, the government provides tax incentives as regulated in Government Regulation No. 81/2015 (GR 81/2015). The incentive provided is the exemption of Value Added Tax (VAT) on imports and/or delivery of solar panel machines needed to produce solar-powered electricity. This machine has not been produced economically in the country so that the import transaction is carried out, whether it is installed or not installed.

The policy is not explicitly applied to the EBT Surya sector, so that it can be utilized by other industries. However, the tax incentive policy provided by the government to date has not been prepared specially for the renewable solar energy sector. These conditions make the renewable solar energy industrial sector only be able to take advantage of the VAT exemption incentive for imports of solar panel machines in the GR 81/2015 scheme. This paper aims to analyze the evaluation of the VAT exemption policy on imports of solar panel machines, including obstacles to the implementation process.

II. LITERATURE REVIEW

Value Added Tax or VAT is a general indirect tax on consumption collected with a different system from sales tax. VAT taxes on value added in production through the various stages of production. Value added is the difference between the value of the goods (or services) sold and the value of goods (services) purchased as intermediate inputs. (Gilbert E. Metcalf, 1995; Alan Tait, 1988).

VAT policy in Indonesia applies the indirect subtraction method. Under this method, entrepreneurs at every level of production up to distribution including retailers impose VAT on sales to consumers (the VAT on its output), credit the VAT paid at the time of purchase (the VAT on its input) and pay taxes to the State Treasury (Alan Tait, 1988). The tax payable is the difference between (tariff x sales value) and (tariff x purchase value). The tax payable is the difference between the tax collected at the time of delivery of goods (services) and the taxes paid at the time of purchase/acquisition of goods (services). The concept of calculating VAT is also known as the credit method adopted by several countries in the world. It is known in Indonesia as output tax deducted by input tax. So what is deducted here is the tax.

There are two types of VAT Incentives, exemption, and zero rates. A zero rate

means that, while no VAT is due on the supply. However, a zero-rated sale is a taxable sale, subject to tax at a zero rate, and input tax on purchases attributable to that sale is creditable (Alan Schenk and Oliver Oldman, 2007). This exception is a system used by the government to ensure that goods or services are exempt from VAT (Tait, 1988). Countries with a destination principle in their international transactions impose a zero percent tariff on the export of certain goods and services because the exported goods and services will be consumed by the destination country (Tait, 1988).

Zero ratings of exports and global supplies are ubiquitous, in conjunction with the destination principle. The zero rates are sometimes known as exemption with credit. But in essence, the VAT output is considered to exist (with a value of 0). Therefore, in calculating VAT credit mechanics, there will always be an overpayment of VAT, as long as there are VAT inputs that are not included in the disallowed VAT input (Haula Rosdiana, Titi, and Maria, 2011). Then the supplier remains entitled to claim any input tax incurred in making that supply and is therefore entitled to a refund of that input tax if there is no output tax against which to offset the input tax (David Williams at Thurony, 1996).

The concept of VAT exemption means that the seller does not charge or list VAT on sales documents, and, as a result, the buyers are denied input credits on those purchases. Besides, the seller is not able to claim input credits for VAT on any of its purchases attributable to the exempt sales (Alan Schenk and Oliver Oldman, 2007). Although exemptions on retail sales may be expected to reduce prices to consumers and VAT revenue to the government, sales exemptions granted in the middle of the production-distribution chain that are followed by taxable sales by the purchasers of the exempt items actually increase consumer prices and VAT revenue over the amounts that would occur if those midstream sales were taxable (Alan Schenk

and Oliver Oldman, 2007). So in the VAT exemption, there is still a VAT burden that can be transferred either to consumers or producers.

There are three justifications for granting VAT incentives in the form of exemption and zero ratings. First, there are exemptions designed to improve the progress of VAT. Second, there are goods and services that are the basic need for the lives of many people ("meritorious") that make these goods and services exempt from tax. Third, some goods and services are too difficult to be taxed so that they will be more administratively efficient not to tax these goods and services (Tait, 1988). VAT exemption is a facility that will be evaluated in this paper. This VAT exemption is given for the delivery of certain types of goods following the applicable laws and regulations. Goods that obtain VAT exemption in this paper are solar panel machines.

III. METHODOLOGY

Qualitative approaches will be used in the processed and analysis of the paper. This study aims to analyze the implementation of VAT exemptions on imports of solar panel machines to encourage the solar-powered renewable energy industry. Data are collected with the literature study and in-depth interview with the Director of the General of Tax and Fiscal Policy Agency, Directorate General of Renewable Energy, Indonesian Solar Module Manufacturing Association, Solar Module Manufacturing Company, as well as academician. One of the associations that oversee companies in the renewable solar energy sector is the Indonesian Solar Module Manufacturing Association (AsosiasiPabrikModul Surya Indonesia/APAMSI). APAMSI is the only association in the field of renewable solar energy that continuously supports the development of the renewable solar energy industry to date.

The location of this research was conducted in Jakarta in 2018. By using the concept of the tax policy principle by AICPA,

data will be analyzed to evaluate the implementation of VAT exemption on solar panel imports. However, the concept of the VAT exemption will elaborate with the implementation of VAT Law in Indonesia.

IV. DISCUSSION

VAT exemption from imports and / or handover of solar panel machines aims to encourage the solar electricity industry so that the amount of solar energy production will increase. The VAT facility can be classified as a form of supply-side tax policy, which is a policy that aims to improve market performance by increasing the capacity of the economy to produce so that the supply curve rises. This policy can be used to reduce market imperfections. The goal is to increase production to increase the number of jobs. In the supply-side tax policy, supply is the base of a policy with Say's Law, which states that each supply will automatically create demand (supply creates its demand), if supply rises, demand will increase.

Supply-side emphasizes (Tait, 1988): (1) Policies that can minimize distortions in the market due to government regulations on prices, subsidies, and high-income taxes. This is consistent with the fact that the government intervened in the formation of electricity prices because electricity is a strategic item for the community. The intervention can take the form of subsidies at certain consumer levels. (2) Policies to reduce distortion so that investment and production will be encouraged by making the work of free-market economic incentives work. The subsidies provided by the government for electricity make the selling price of solar-powered electricity energy must be suppressed while the investment value of solar power plants tends to be high. In designing the VAT system, it is necessary to pay attention to the principle of neutrality. This is intended to eliminate the cascading effect as in the Sales Tax system.

- Activities in certain areas or certain places within the Customs Area;
- Submission of certain Taxable Goods or delivery of certain Taxable Services;
- Import of certain Taxable Goods;
- Utilization of certain intangible Taxable Goods from outside the Customs Area inside the Customs Area;
- Use of certain Taxable Services from outside the Customs Area within the Customs Area.

Implications of VAT Exemption for Taxable Entrepreneur

In GR 81/2015 regulates, VAT exemption is only granted if import and/or delivery of certain strategic taxable goods. As a consequence of VAT being waived, the input tax on imports and/or on the acquisition of taxable goods and/or taxable services used to produce certain strategic taxable goods, cannot be credited. The solar panel machine is the primary tool in the application process of PV technology and is the main capital item used by the renewable solar energy industry in the process of producing solar-powered electricity. The solar panel machine is needed PLTS so that it meets the criteria of capital goods that are strategic. Solar panel machines are capital goods that directly produce taxable goods (electricity). These machines are imported by PLTS to be installed in predetermined land. Once installed, this machine will function to convert sunlight energy into solar-powered electricity.

As a consequence of the VAT calculation method, both direct and indirect subtraction methods, all VAT inputs related to the acquisition of goods or services provided by the VAT exemption facility, cannot be credited. Thus, it can be said that economically, there is still a VAT burden that can be transferred, either to consumers or producers. VAT exemption always distorts the price as a consequence of the input tax paid by a taxable entrepreneur that cannot be credited, so taxable entrepreneur tends to be an element of cost. Thus, the benefits of this facility are not in the form of a 10% reduction in price, but by the

percentage of value added minus the input tax already paid by taxable entrepreneur. The cost of taxation, especially compliance costs, will be high if the VAT exemption is not done automatically, but instead requires the procedure of tax authority approval.

VAT exemptions from imported solar panel machines cannot be automatically obtained. A taxable entrepreneur must go through the process of applying for a VAT-Free Certificate (SuratKeteranganBebas/SKB) at the Tax Service Office. The VAT SKB is issued for each import transaction. Application for VAT SKB can be submitted directly to the Head of the Tax Service Office, where the Taxable Entrepreneur is registered before entering into an import transaction. After the VAT SKB application is received in full, the Head of the Tax Service Office gives a decision within 5 (five) working days.

The VAT SKB will be the basis for taxable entrepreneurs importing solar panel machines to obtain VAT exemption facilities. In the process of requesting this VAT SKB, the company needs a period to prepare documents for submitting the VAT SKB application while waiting for the issuance and approval of the certificate. This adds to the time costs that must be borne by renewable solar energy industry players. Supporting documents are an essential factor in determining this VAT exemption facility. So when VAT exemptions are not obtained automatically, the tax burden will tend to be high, and compliance costs are also high.

The Implications of VAT Exemption Policy for Taxable Entrepreneurs can be described as follows:

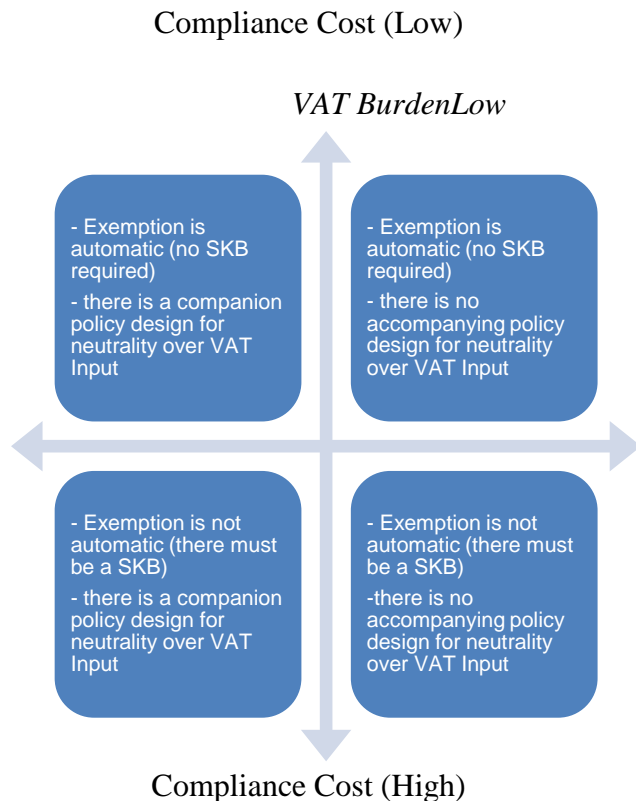


Figure 3 The Implications of VAT Exemption Policy for Taxable Entrepreneurs

Source: Rosdiana, Titi, and Maria, 2011

One problem that often arises in the renewable solar energy industrial sector is the lack of a classification of renewable solar energy industrial goods. This is due to the lack of synergy between the Ministry of Energy and Mineral Resources and the Ministry of Industry. Coordination is crucial in determining the success of a policy. Lack of coordination among the ministries involved has led to errors in the field in the policy implementation process. Transactions for the purchase of solar panel machines are carried out with the import process from other countries so that the interpretation of types of goods through the HS Code becomes essential. Misinterpretation of the kinds of goods makes the VAT SKB cannot be issued because it will fail in the research stage by the relevant Tax Service Office. This shows the list of classifications of goods referred to in the VAT exemption

regulations for the import of solar panel machines still causes different interpretations.

The components used in renewable solar energy technology have similarities with other industrial parts. Examples of components that are similar to other industries are glass sheets and silicon glass sheets. When viewed from the physical, the two goods have no difference. The characteristics described in the HS Code glass sheet are similar to silicon glass sheets. The implementing VAT Burden exemption policy on solar panel machines is the Directorate General of High not understand the technical details and classification of PV technology components. Therefore, the list of classification information of these components should come from the Ministry of Energy and Mineral Resources who understands the PV technology. However, the implementation of the classification list has not been made by the Ministry of Energy and Mineral Resources and the Ministry of Industry, so that it often causes disputes in the process of filing VAT exemptions.

The above facts show the lack of effectiveness of the VAT exemption policy on imports of solar panel machines. The possibility of this error can be caused by the lack of machine definitions and descriptions of certain strategic goods in regulations related to the VAT exemption policy on imports of solar panel machines. If there is no supporting document that is evidence of classifying the goods as certain items that are VAT exemption, the VAT SKB cannot be issued. VAT exemption policy on the import of solar panel machines in its implementation does not increase the effectiveness of renewable solar energy electricity production. This facility policy only adds to the time cost, and the industry does not obtain the facility. VAT exemption is not attractive to a taxable entrepreneur

The party that determines the success of a tax facility policy is the industry player who is the target of the policy. The renewable solar energy

industry is an industry that is still developing in Indonesia. At present, the number of industry players registered with APAMSI is always 9 (nine) companies. The nine companies also have diverse solar energy electricity production capacities. The small scope of industries and markets owned by the renewable solar energy industry makes industry players reluctant to utilize existing facilities. The industry does not feel it is essential to put out the business to obtain a VAT exemption facility for the import of solar panel machines. Machine purchase transactions are only carried out within a dozen years because the usage period is quite long. Sales for the purchase of solar panel machines are carried out for more than five years. This is caused by the use of the tool, which reaches 10 to 15 years.

Business people who are members of APAMSI require a VAT exemption facility for imports or delivery of spare parts compared to solar panel machines. Transactions for the purchase of spare parts in imports are more often done compared to the purchase of solar panel machines. The use of machinery during those dozen years requires a periodic maintenance process. This maintenance is carried out because of the uncertain weather conditions in Indonesia and high rainfall throughout the year. The need for spare parts arises when this maintenance process is carried out. This makes the VAT exemption policy on imports of solar panel machines still zero.

However, through Decree of the Minister of Finance No. 268 / PMK.03 / 2015 (PMK 268/2015), it is emphasized that certain strategic taxable goods upon import are exempt from the imposition of VAT, including machinery and plant equipment which constitutes a single unit, both in attached or detached conditions, which are used directly in the process of producing taxable goods by taxable entrepreneurs that create taxable goods, excluding spare parts. Therefore PLTS entrepreneurs will not get this VAT facility if they

only import a few components such as batteries or solar panel machine cables.

The government's reason for not releasing VAT on the delivery of spare parts is because, in its implementation, there is no guarantee that the facility does not cause conflicts of interest with industries other than renewable energy. Fiscal Policy Agency (BadanKebijakanFiskal/BKF) requires a list of taxable goods classification, which includes parts from the Ministry of Energy and Mineral Resources as the guiding ministry or APAMSI as an industry player. Both parties are considered as parties who understand the components used in the use of PV technology. However, the Ministry of Energy and Mineral Resources and APAMSI have not yet discussed the process of classifying spare parts. Coordination between the Ministry of Energy and Mineral Resources and APAMSI is needed to build a strong argument to prove to the policymakers that the spare parts are components that have distinctive specifications for solar panel machines.

V. CONCLUSION

The businessman or manufacturer of the Indonesian Solar Module determines the success of the VAT exemption policy on the delivery or import of solar panel machines. The granting of VAT exemptions is intended to encourage to use solar panel machines that produce solar energy.

The solar panel machine is the primary tool in the application process of PV technology and is the main capital item used by the renewable solar energy industry in the process of producing solar-powered electricity. The solar panel machine is needed by PLTS so that it meets the criteria for strategic capital goods upon import and delivery of VAT exemption. However, the VAT exemption facility for the surrender and import of solar panel machines is not attractive to entrepreneurs. VAT exemption still distorts the price as a consequence of the input tax paid by taxable entrepreneurs that

cannot be credited, so taxable entrepreneurs tend to be an element of cost.

Thus, the benefits of this facility are not in the form of a 10% reduction in price, but per the percentage of value added minus the input tax already paid by taxable entrepreneurs. The cost of taxation, especially compliance costs will be high if VAT exemption is not done automatically, but instead requires the procedure of tax authority approval. The industry needs a VAT exemption for spare parts for the maintenance of solar panel machines. However, given that it is difficult to distinguish between components that are used explicitly for strategic goods or not, the granting of VAT exemptions for spare parts is feared to be detrimental to government revenue.

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