

Introduction to the ISA Policy and Finance Training Center

—Transcript of a webinar offered by the Clean Energy Solutions Center on 21 August 2018—
For more information, see the [clean energy policy trainings](#) offered by the Solutions Center.

Webinar Panelists

Toby Couture	E3 Analytics
David Jacobs	International Energy Transition
Hugo Lucas Porta	Factor CO2

This Transcript Because this transcript was created using transcription software, the content it contains might not precisely represent the audio content of the webinar. If you have questions about the content of the transcript, please [contact us](#) or refer to the actual webinar recording.

Toby Couture Welcome to the International Solar Alliance's Expert Training Series. This is part of a cooperation between Clean Energy Solutions Center and the International Solar Alliance. The goal of this initiative is to bring expert trainings to stakeholders around the world who are interested in learning more about solar energy policy, solar energy strategy, as well as the technical and engineering-related aspects of solar development. The International Solar Alliance was founded on the idea that the potential for solar energy to bring cost-effective affordable energy to countries around the world is tremendous. The Clean Energy Solutions Center is also, in partnership with the International Solar Alliance, one of the leading institutions in providing training and capacity-building solutions, to support the scaleup of solar.

This international training series is going to be led by a number of experts from around the world. To my left, I have Dr. David Jacobs, with IET, International Energy Transition, based here in Berlin. And to my right is Hugo Lucas, an expert with Factor, here also in Berlin. And I'm Toby Couture, the director E3 Analytics. The technical components of this training series are going to be delivered by a range of experts from the National Renewable energy Lab.

David Jacobs In this training course, we'll have a total of eight modules. In these modules, you will learn about technologies, you will learn about policies, and we are also going to present a wide range of case studies from around the world of how solar PV deployment took place in the last couple of years.

In the first module, we're going to look at policies for distributed solar PV, so mostly focusing on roof-mounted solar PV. We will discuss the different policies that are used for this market segment, _____ tariffs, for instance, net metering, net fit programs, and so on, so you will have a wide range of policies you can use in order to steer this market segment. We will also look at rate design, because this has been a major concern for utilities: how do you need to restructure the rates for your customers, in order to integrate solar PV and have a fair cost and burden distribution among all the rate payers. And last but not least, we will also look at different business models for solar PV, because around the world, we have seen that there's a large variety of business models emerging in different markets around the world.

In Module Two, we will look at policies for large-scale solar PV. And, you know, most of solar PV large-scale projects in the last couple of years have been triggered by auctions, so we're going to have two in-depth sessions on auctions. First of all, focusing on the basic auction design; also, looking at the latest results of auctions around the world. And also trying to understand what is actually needed to achieve these very low-cost auctions that we have seen in countries like Mexico, Morocco, and other countries around the world. Next to this, we will also try to understand some of the more finer auction design mechanisms, for instance, to trigger some specific socioeconomic benefits like job creation, what kind of specific auction design is actually required, to not only have low-cost auctions but to balance this with other policy objectives that policymakers also might have.

In Module Three, we will look at the future of policies, for solar PV and also for concentrated solar power. When we look at the future of solar PV, we will start with a discussion of subsidies for solar. Because the question is: does solar still need subsidies, how much longer, do they still need subsidies at all? There is a variety of opinions about this around the world, so first of all, we need to have a clear understanding what is actually a subsidy and what is market design. And from there, we move on to the second session and look how much longer and in which market solar PV might still require a subsidy, and where we can already operate with a slightly modified market design.

In the next module, Module Four, we're going to look at more technical issues. That means, how do you integrate an increasing share of solar PV in distribution and transmission networks into the system. So we're going to look at, for instance, transmission planning, how much new transmission capacity do you actually need to integrate a certain share of solar PV. We're also going to look at distribution network planning, what is needed at this point. And we're also, of course, going to look at some other technical issues like grid codes and so on, so you will learn, from a technical perspective, what is needed in order to increase the share of distributed and also large-scale solar PV.

In Module Five, you will learn about the market and system integration of solar PV. We saw a lot of countries around the world, in the last couple of years, where the share of solar PV was increasing rapidly. And this had impacts on the market, especially on the wholesale market where we actually

saw the price going down, which is normally referred to as the merit order effect. So, we will discuss this in-depth, in as much as the duck curve, which has been observed in many markets, for instance, in California, we are also going to discuss this with you.

We are also going to look at how you have to design wholesale markets in order to integrate solar PV in the most cost-effective way. In this module, we will also look at energy storage, and we will also look at sector coupling, so that means coupling the electricity sector with the heating and cooling sector and with the transport sector, which might also help to better integrate solar PV into the energy system as a whole.

Hugo Lucas Porta

And now, we move on to the module on socioeconomics of the solar sector. The International Renewable Energy Agency estimates that 3.5 million people work, today, in the solar sector, and these people are working both in developed and developing countries—China, India, Bangladesh are countries living differently. Furthermore, the agency estimates that in 2050, 9 million people will be working in the solar sector. In this module, we study the strengths, but we will look into the detail of the supporting schemes, the neighbor environment, and the policies for countries to maximize their local content.

Linked to employment, there is the need for education of professionals. The sector is demanding a huge quantity of qualifier skills, and today, the education sector is not providing these professionals. So we will look to the best strategies to improve, increase, and facilitate access to education and training in the solar sector. Last but not least, there is a need to increase awareness: the final user, people at home, in the industry, they don't know the benefit of having a rooftop solar or installing a concentrated solar heat system for their industry and in their industrial processes. We will study the best way to communicate renewables, we will study which are the misconceptions that today persist in the solar sector, and we will address them with the best practices on overcoming these misconceptions.

We will look into the detail and we will discuss the needed ecosystem for a sustainable market deployment solar off-grid. Because today, it still has to be proved that this company and this market are sustainable in time. They are all companies struggling to get more incomes for their activities, they are becoming multiutilities, they are selling not only electricity but they are selling devices, they are selling IT, water, they are being micro-financed companies, as well. So we will look to these all trends in the market, and the policies and supporting schemes needed for a sustainable off-grid market.

Toby Couture

The eighth and final component of this International Solar Alliance Training Series is going to be focused specifically on the solar heating and cooling sector. This is an often underappreciated aspect of the solar sector, and yet, the potential is tremendous. So we're going to break this down into three different components: one training session focused specifically on some of the challenges, another focusing specifically on the technology, and a final component looking at the various policy and regulatory mechanisms that can be used to scaleup investment in the solar heating and cooling sector.

Now that you've seen an overview of the various topics that we're going to cover in this training series, David, Hugo, and myself are really looking forward to joining you as we explore these topics together. We're also grateful for the support provided by the Clean Energy Solutions Center and the International Solar Alliance, that make this training series possible. We greatly look forward to joining you, as we explore the solar sector together.

DRAFT