

World Bank Middle East & North Africa Concentrated Solar Power Knowledge & Innovation Program
Workshop on CSP Markets, System Value & Financing
 March 6-8, 2017, MASEN Center - Noor Solar Complex, Morocco
Draft Agenda

Event languages: Arabic, English and French

This event is the first of a series of workshops to be held from 2017 to 2019 as part of the World Bank's CTF-supported MENA CSP Knowledge and Innovation Program.

The workshops aim to provide decision makers across the MENA region with key information about concentrated solar power technology, financing, and system-wide value in the MENA region and other regions actively developing CSP. They are designed to be interactive and are meant to foster questions and knowledge exchange amongst participants.

Day 1: March 6, 2017 (Monday)

<i>Times</i>	<i>Speakers</i>	<i>Sessions</i>
11:30 – 12:00	Travel from hotels to MASEN Conference Center	
12:00 – 12:30	Registration	
12:30 – 13:30	LUNCH (60 min)	
13:30-13:40	Jonathan E. Sinton – World Bank Group	Welcome
13:40-13:50	Introduction & update of CSP In MENA and the Knowledge and Innovation Program	
	Jonathan Walters - MENA CSP KIP / Castalia <i>Chair: Jonathan E. Sinton – World Bank Group</i>	<ul style="list-style-type: none"> Understand the history, role and objectives of the MENA CSP Knowledge & Innovation Program (KIP) Get an update of the development of the Program, what services are available and how it can help develop CSP capabilities through the MENA region
13:50 – 14:00	Concentrated Solar Power Market Status and Outlook	
	Jorge Servert - Solar Technical Advisors (STA)	<ul style="list-style-type: none"> Hear a Global overview of the CSP utility-scale markets a with special

	<p><i>Chair: Jonathan E. Sinton – World Bank Group</i></p>	<p>focus of the Middle East & North African countries</p> <ul style="list-style-type: none"> • See the historical evolution and mid-term scenarios of CSP costs • Learn about significant developments in non-electricity applications of CSP
14:00 – 14:45	<p>Managing a National CSP Program: Lessons Learned in Morocco</p>	
	<p>Nadia Taobane - MASEN</p> <p><i>Chair: Jonathan E. Sinton – World Bank Group</i></p>	<ul style="list-style-type: none"> • Distill key lessons drawn from the Moroccan experience for the development of future CSP programs in other countries in the Noor CSP Projects, including job creation and the economic and social benefits • Understand the benefits and challenges of using a Competitive Bidding formula for cost-effectiveness compared to other policy frameworks • Analyze Morocco’s experience with financing Public Private Partnerships (PPPs) to deliver CSP Projects
14:45 – 15:15	<p>COFFEE BREAK (30 min)</p>	
15:15 – 15:40	<p>China’s Renewable Energy Program and the role of CSP in the Energy Mix</p>	
	<p>Sun Rui - Electric Power Planning & Engineering Institute (EPPEI)</p> <p><i>Chair: Jonathan E. Sinton – World Bank Group</i></p>	<ul style="list-style-type: none"> • Understand how and why China has decided to invest in CSP • Hear how China is a very promising CSP market and CSP investment in China could bring manufacturing economies of scale and reduce CSP costs globally, as well as bringing new developers and suppliers to MENA countries
15:40 – 17:10	<p>CSP Concessional Financing Panel (90 min)</p>	
	<p>Adama MOUSSA – African Development Bank (AfDB)</p>	<p>Moderator: Jonathan Walters – MENA CSP KIP / Castalia</p>

	<p>Fabrice Juquois - Agence Française de développement (AFD) Zhihong Zhang – Clean Technology Fund (CTF) Ariane Brunel – European Bank of Reconstruction and Development (EBRD) Dana Younger – International Financial Corporation (IFC) Markus Faschina - Kreditanstalt für Wiederaufbau (KfW) Erik Fernstrom – World Bank Group</p> <p><i>Chair: Jonathan E. Sinton – World Bank Group</i></p>	<ul style="list-style-type: none"> • Understand how concessional finance works for CSP project developments, how concessionality impacts cost, and why international financial institutions have been providing it from the Clean Technology Fund and other sources • Hear about lessons learned from CSP projects or other emerging technologies financed with concessional financing, and understand best practice • Hear from the main international financial institutions what funds, such as the Green Climate Fund, are available, and what are the prerequisites of such financing for CSP projects
17:10 – 17:20	Jonathan E. Sinton – World Bank	Wrap-up for the day and what to expect tomorrow
17:20 – 17:50	Return to hotels	
20:00 – 22:30	NETWORKING DINNER	

Day 2: March 7, 2017 (Tuesday)		
<i>Times</i>	<i>Speakers</i>	<i>Sessions</i>
8:30 – 9:15	Travel to Conference Center	
9:30 – 11:00	Concentrated Solar Power Market Status and Outlook	
	Presentation by: Jorge Servert – Solar Technology Advisors (STA)	Moderator: Jonathan Walters – MENA CSP KIP / Castalia

	<p>Followed by a panel session with:</p> <p>Cédric Philibert – International Energy Agency (IEA)</p> <p>Michael Taylor – International Renewable Energy Agency (IRENA)</p> <p>Frank Wouters – MENA CSP KIP / Castalia</p> <p>Christoph Kost – MENA CSP KIP / Fraunhofer Institute</p> <p>Mark Mehos – National Renewable Energy Laboratories (NREL)</p> <p>Manuel Millán – World Bank Group</p> <p><i>Chair: Jonathan Walters – MENA CSP KIP / Castalia</i></p>	<ul style="list-style-type: none"> • This presentation you will hear an introduction to the draft results of two reports that survey the global status and outlook of: utility-scale CSP plants, and • other CSP applications, e.g. industrial process heat, desalination and hybridization with other power generation sources. <p>The presentation will be followed by commentary from CSP experts.</p>
<p>11:00 – 11:30</p>	<p>Questions and Answers on MENA Region CSP Review Report</p> <p>Jorge Servert - Solar Technology Advisors (STA)</p> <p><i>Chair: Jonathan Walters – MENA CSP KIP / Castalia</i></p>	<p>Moderator: Jonathan Walters – MENA CSP KIP / Castalia</p> <p>In this session you will hear feedback from participants at the workshop and you will have the opportunity to share your views. Together with written comments submitted afterwards, this session will inform the final versions of both reports.</p>
<p>11:30 – 12:15</p>	<p>COFFEE BREAK</p>	
<p>12:15 –</p>	<p>IRENA’s views on current and near-term trends in CSP development</p>	

13:30 – 15:00	LUNCH	
15:00 – 16:40	Measuring the value of CSP in the Power System Panel Session	
	<p>Luis Crespo – ESTELA</p> <p>Cédric Philibert - International Energy Agency (IEA)</p> <p>Michael Taylor – International Renewable Energy Agency (IRENA)</p> <p>Christoph Kost – MENA CSP KIP / Fraunhofer ISE</p> <p>Mark Mehos - National Renewable Energy Laboratory (NREL)</p> <p>Manuel Millán – World Bank Group</p> <p><i>Chair: Silvia Pariente David – World Bank Group</i></p>	<p>Moderator: Silvia Pariente David - World Bank Group</p> <ul style="list-style-type: none"> • See a like-for like comparison of CSP, natural gas, and PV in the grid • Analyze how CSP with storage provides dispatchability that maintains grid stability and matching of supply and demand curves • Observe CSP cost reductions through innovation and economies of scale –and forecasts • Find out what is the role of CSP in the electricity grid and how it affects its management
16:40 – 17:00	Jonathan E. Sinton – World Bank	Wrap-up for the day and what to expect tomorrow
17:00 – 18:00	Return to Hotel	

Day 3: March 8, 2017 (Wednesday)		
8:10 – 8:45	Travel to Conference Centre	
9:00 – 10:20	Integrating renewable energy markets Europe-MENA	
	<p>Luis Crespo – ESTELA</p> <p>Obaid Amrane – MASEN</p> <p>Cédric Philibert - International Energy Agency (IEA)</p> <p>Kevin Sara – TUNUR</p> <p>Moez Cherif – World Bank</p>	<p>Moderator: Silvia Pariente David</p> <ul style="list-style-type: none"> • Understand how CSP, as part of a renewable energy mix, could contribute to the industrial and economic development of MENA countries through integration of Europe-MENA electricity markets

	<p><i>Chair: Silvia Pariente David – World Bank Group</i></p>	<ul style="list-style-type: none"> • Hear how regional markets integration supports renewable energy scale up and therefore the Paris agreement • Understand the nature of the market integration barriers to overcome, and what the implications are for investment • Analyze what are the implications of the Paris/Marrakech Agreement, renewable energy support mechanisms in European countries, and new EU RE legislation
10:20 – 11:05	COFFEE BREAK	
11:05 – 12:05	CSP Case Study Roundtables	
	<p><i>Chair: Belén Gallego – MENA CSP KIP / ATA Insights</i></p>	<p>One moderator per table</p> <p>Participants will break into at least three smaller groups for interactive roundtables on specific topics. Each round table will have ten people and a moderator.</p>
12:05 – 12:15	Safety briefing for site visit	
12:15 – 12:30	Jonathan E. Sinton – World Bank	Closing remarks
12:30 – 14:00	LUNCH	
14:00 – 17:00	Noor Site Visit (3 hours)	
		<p>The site visit to Noor I, Noor II and Noor III will enable delegates to cement their understanding of CSP through a guided tour of the plants:</p> <ul style="list-style-type: none"> • Noor I is a 160MW parabolic trough plant with 3 hours molten salt storage. This plant is currently fully operational • Noor II is a 200MW parabolic through plant with 8 hours molten

		<p>salt storage. This plant is currently under construction</p> <ul style="list-style-type: none"> • Noor III is a 150MW tower plant with 8 hours of molten salt storage. This plant is currently under construction
17:00 – 17:30	Return to hotel	