



Photo Credit: Women in Energy Pakistan, <http://womeninenergy.pk>

WORLD BANK-UNEP  
WEBINAR REPORT

# Connecting Sustainable Energy Businesses with Education

*- Getting the Workforce  
You Need -*

FEBRUARY 25, 2021  
7:00 - 9:00 A.M. (EST)



**THE WORLD BANK**  
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**UN** environment programme • youth & education alliance

# Table of Contents

**OVERVIEW** ----- Page 3

**WEBINAR HIGHLIGHTS** ----- Page 4

**DISCUSSION TAKEAWAYS** ----- Page 7

**WEBINAR STATS & FIGURES** ----- Page 8

**AGENDA** ----- Page 10

**SPEAKERS & DISCUSSANTS** ----- Page 11

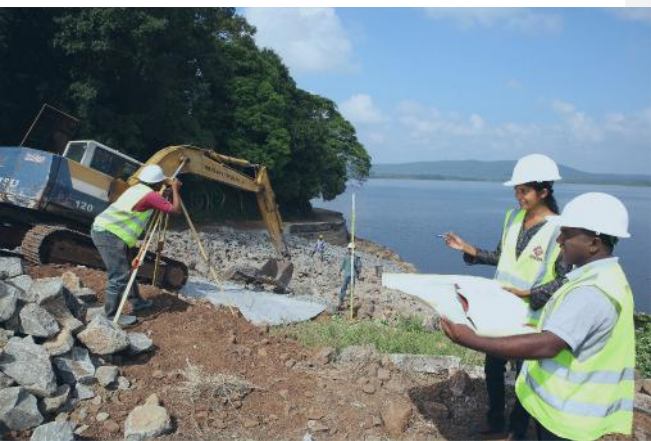
**MODERATORS & TEAM** ----- Page 12

**WEBINAR RECORDING & RESOURCES** ----- Page 13





Photo Credit: Women in Energy Pakistan, <http://womeninenergy.pk>.



## Overview

The clean energy transition is creating new job opportunities around the world. With the rapid expansion of renewables and energy efficiency, along with technology disruptions, the needed skill sets of tomorrow's workforce are going to be significantly different. How can the private sector connect with educational and training institutions to prepare the workforce for clean energy and the green economy?

This webinar aimed at helping employers and educators connect to prepare the workforce for the green economy. The intended audience was businesses and organizations in the green economy and clean energy sectors, higher education institutions, and workforce developers.

This webinar provided two opportunities: for private sector employers to share what businesses need in their new hires; and for employers and educators to streamline communications about curricula and recruitment. The event also discussed the policies, processes, and incentive mechanisms (within the private sector, education, and the labor market) required to support the development of the green workforce.

The webinar was organized by the UNEP Education team, affiliated with GO4SDGs, and World Bank's MENA Energy team under the "Disruptive Clean Energy Transition and Employment Opportunities" activity, funded by Energy Sector Management Assistance Program (ESMAP).

# Clean Energy and Jobs: Key Trends

11 mln 

direct jobs created in renewable energy sector worldwide in 2018 (IRENA 2020)

6 mln 

direct jobs in energy efficiency in major economies (US, Europe, Canada, China, Brazil, Australia) in 2019 (IEA 2020, Energy Efficiency 2020)

4 mln 

jobs in the sustainable, nuclear, and storage energy sectors in the US in 2019. Energy efficiency jobs are the largest segment of clean energy jobs in the US (2.3 million jobs), while natural gas supported roughly 398,000 jobs and solar 345,000 jobs. (US Energy and Employment Report, NASEO & EFI 2020)

## COVID-19 Impact on the US Jobs in the Clean Energy Sector

In 2020, the clean energy sector finished the year with the fewest number of workers since 2015. 12% of the US clean energy workforce remained unemployed by year's end, making 2020 the first year that clean energy employment saw a decline. 70% of the jobs in the clean energy sector had yet to be recovered by year end. At the rate of recovery over the last six months of 2020, the clean energy sector would not reach pre-COVID employment levels for another 2,5 years (US Energy and Employment Report, NASEO & EFI 2020).

## Webinar Highlights

*-Takeaways from REN21 and Solar Sister Presentations -*



Renewable-based energy access provides direct and indirect employment. Distributed renewables for energy access create jobs related to the productive use of energy in the developing world.



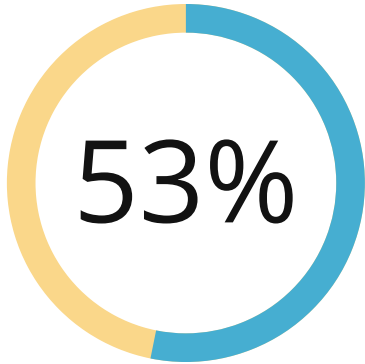
The private sector and the government should not overlook the capacity development of underserved communities. Focus on education, skill development and on-the-job training, provide incentives for both employment and entrepreneurship.



Promoting inclusiveness in the workplace to retain young talent in clean energy is fundamental. Recognizing and empowering women in the energy sector is not just the right thing to do but the smart thing to do.

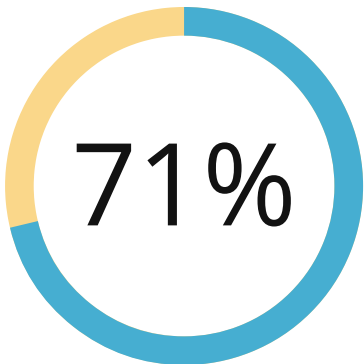
# Webinar Highlights

*U.S. Perspective*



## BCSE Survey Respondents

have a workforce development policy in place



## BCSE Survey Respondents

have a diversity and inclusion policy in place

*Although workforce development and diversity and inclusion policies are complementary, they are still two distinct issues, with distinct objectives.*



Knowledge can be acquired.  
Skills can be developed.  
Abilities can be sharpened.

## Results of the 2020 Member Survey of the US Business Council for Sustainable Energy

### Top current workforce development activities:

- Apprenticeship or training programs
- Educational partnerships

### Top federal government workforce-related programs utilized

- Military veterans and
- Department of Labor Apprenticeship program

### Top areas for additional federal government support

- Educational partnerships
- Training for underrepresented groups

### Barriers to workforce development include:

- Limited staff and financial resources
- Internal awareness, adoption, and employee involvement
- Lack of training tied to real projects
- Lack of qualified and diverse labor pools. Geographic limitations
- Challenge to perform day-to-day job and train for future job
- Pandemic cut off pipeline, need for more virtual/online opportunities
- Finding qualified individuals and diverse candidates

### Among opportunities for workforce development are:

- Advocacy that highlights well-paying clean energy jobs and career paths, especially to displaced and underrepresented communities
- Knowledge sharing among industries: benchmarking and best practices of companies
- More virtual trainings and learning opportunities, industry-specific
- Education programs for children and students
- Encourage STEM and technical fields
- 6-12th grade programs that introduce energy and energy careers
- Targeted outreach to expand inclusion and diversity of students

“ Government policy sends important signals to the entire clean energy ecosystem on workforce development.

## Results of the 2019 Survey of the MENA Clean Energy Business Council

Respondents highlighted the following workforce skills importance and existing gaps:

- **Executive skills** are the most important to reach their career goals
- **Technical skills** more closely related to formal education were ranked as essential for some roles, while almost insignificant for others.
- **Social skills and administrative skills** are ranked as less important to individuals in achieving their career goals.

### Key Takeaways from the Survey

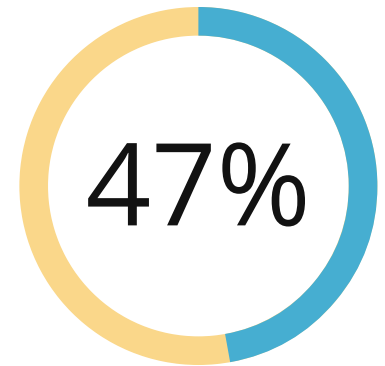
- The MENA region is undergoing a transition that could entail important demographic dividends as a larger proportion of the population reaches a productive age. Besides young talent, female talent can be attracted and retained more effectively in the clean energy sector.
- Institutional leadership remains key to harness this young labor force through the clean energy ecosystem. Policy needs to be comprehensive, coordinated, and time-consistent to send clear signals to all sectors, create safe and attractive environments for infrastructure development, and improve the skills of the labor force.
- Individuals need more options to improve readiness through their careers and jobs. Capacity development needs to address both formal education and on-the-job training. Altogether, these measures could help prepare governments, organizations, and people for the challenges of the future.
- Measures to tackle the gaps in education and R&D need to be gender-sensitive to capture female talent.

# Webinar Highlights

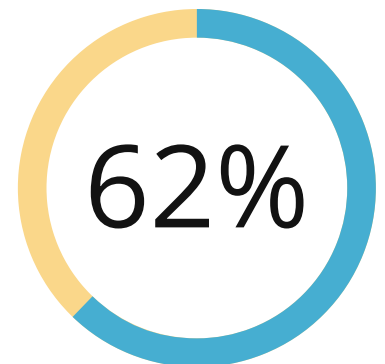
## MENA Perspective

*Women empowerment is crucial for MENA clean energy transition. Organizations are in the process of incorporating female talent but need to maintain and enhance these efforts to tap into the full potential region.*

### CEBC Survey Respondents



said overall, there are more men than women in the workplace...



...but at the executive level it jumps to...

# Discussion Takeaways

- Despite the myth that the energy sector needs only engineers, the energy workforce needs people with various educational backgrounds and thus can be very inclusive.
- There are many competencies that cut across engineering, law, business, and other disciplines. Network development between disciplines will enable Interdisciplinary coordination that is crucial for the clean energy transition.
- The majority of renewable energy jobs require more than a high-school education but less than a four-year degree. It provides opportunities for people who would like to be technicians in this field.
- One of the challenges is the uptake of renewable energy educational programs. Students are still attracted to conventional market-driven programs. For example, students prefer doing studies in electrical engineering with some renewable energy courses rather than specializing in a niche program that is exclusively focused on renewables.
- Cooperation between various stakeholders is key. From the private sector perspective, it is important to build strong partnerships with educational institutions, labor-management organizations, workforce development boards, public entities. The private sector needs to continue defining and making clear what are the credentials and certifications needs, continue collecting data on sector needs, as well as organizing training centers and professional development for educators.

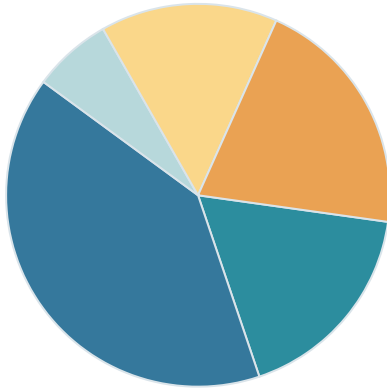


Areas of cooperation between industry, academia, and government include:

- jointly designing course curriculum, providing feedback for existing curriculum, and developing education policy that promotes treating renewable energy as integrated and independent streams of study;
- offering scholarships and fellowships to attract student to programs along with structured internship programs for making students job-ready;
- creating renewable energy labs to facilitate learning by doing;
- sponsor clean energy certificate programs;
- support applied research for evidence-based policymaking;
- build capabilities related to career advising and green jobs placements.

# Webinar Stats & Figures

## Types of Organizations Represented



- Business 18%
- Education 40%
- Government 7%
- NGO/Civil Society 15%
- Others 21%



**771** registrations



**375** attendees



**49** attendance rate, %



**66** countries  
Represented during the session

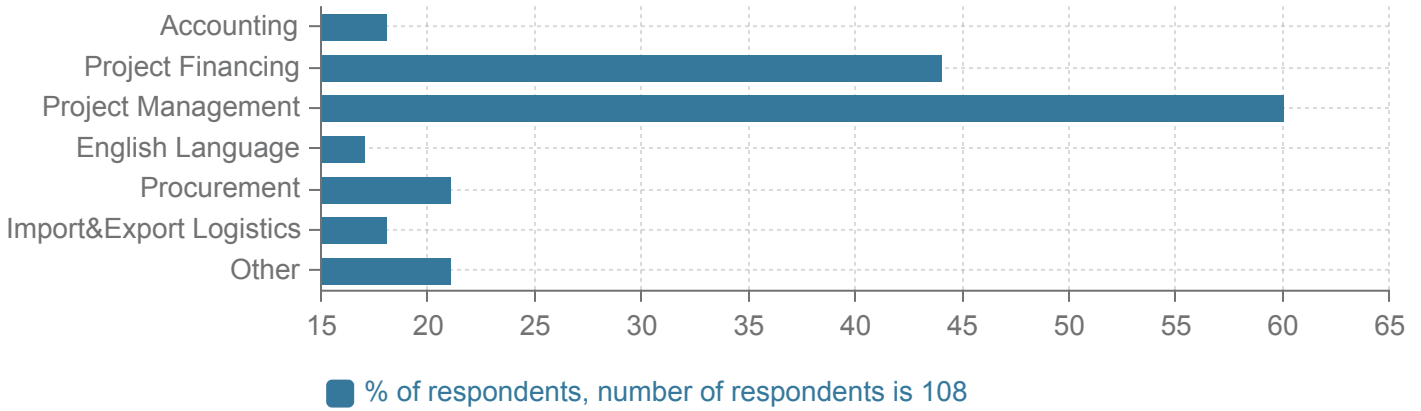


**71** minutes  
Length of stay on average

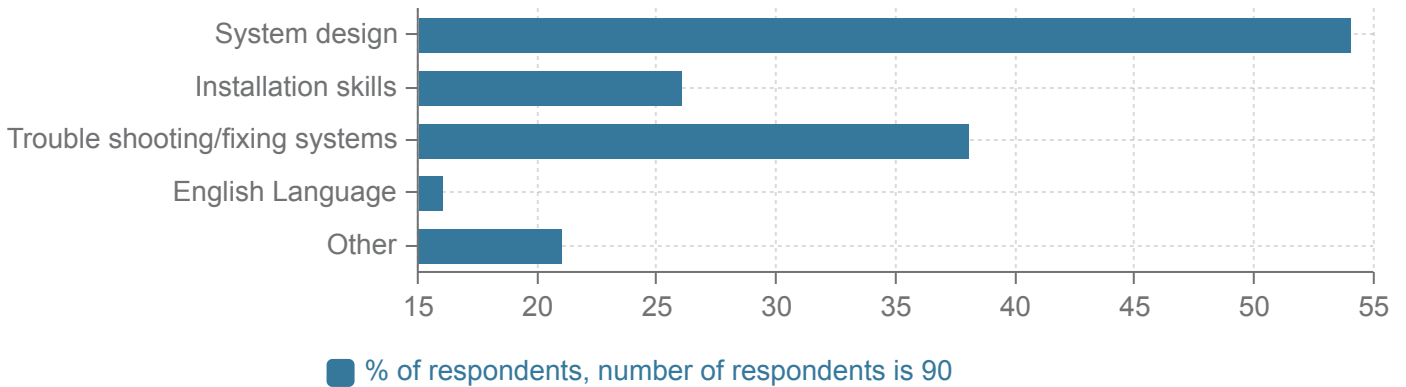


# Webinar Poll Results

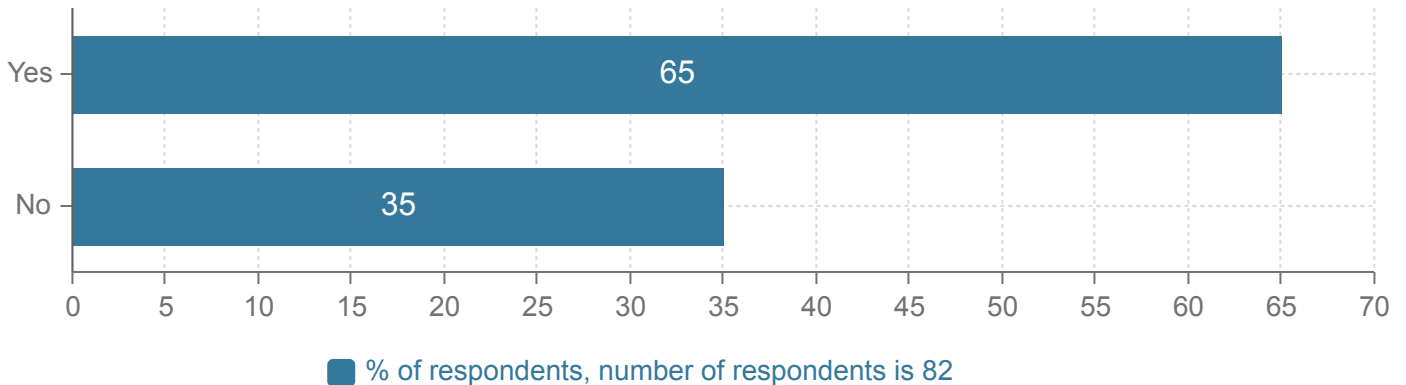
**What are the skills and competencies that tend to be missing in the job applicant pool for management and support staff positions?**



**What are the skills and competencies that tend to be missing in the job applicant pool for technical positions?**



**Are you having difficulty recruiting from certain backgrounds e.g. women, people with disabilities, minorities or marginalized communities?**



# Agenda

7:00 - 7:10

## Opening Remarks

**Mari Nishimura**, United Nations Environment Programme

Master of Ceremonies: **Tu Chi Nguyen**, The World Bank

7:10 - 7:50

## Panel Discussion of Speakers from Business Associations in the Clean Energy and Green Economy Sectors

Moderator: **Erik Fernstrom**, The World Bank

Speakers:

**Thomas André**, REN21: Renewables Now

**Lisa Jacobson**, Business Council for Sustainable Energy, USA

**Ahmed Samir Elbermbali**, Clean Energy Business Council MENA

**Olasimbo Sojinrin**, Solar Sister, Nigeria

7:50 - 8:20

## Discussion with Respondents from Higher Education and Workforce Development

Moderator: **Debra Rowe**, US Partnership for Education for Sustainable Development

Discussants:

**Fawzia Tarannum**, TERI School of Advanced Studies, India

**Jean-Christopher Carteron**, Kedge Business School, France

**Prem Jain**, University of Zambia, Zambia

**Ken Walz**, Madison College, CREATE Renewable Energy Center, USA

**Cheryl Desha**, Griffith University, Australia

**Ahmed Benlarabi**, Research Institute for Solar Energy and New Energies, Morocco

**Hideaki Ohgaki**, Kyoto University, Japan

**Andreas Blom**, The World Bank

8:20 - 8:50

## Q&A Session with Speakers and Respondents

Moderators:

**Tu Chi Nguyen**, The World Bank

**Debra Rowe**, US Partnership for Education for Sustainable Development

8:50 - 9:00

## Closing Remarks

**Paul Noumba Um**, The World Bank

# Speakers



**Thomas André**

Director of Operations,  
REN21 – Renewable Energy Policy  
Network for the 21st Century



**Lisa Jacobson**

President,  
Business Council for  
Sustainable Energy



**Ahmed Samir  
Elbermbali**

Managing Director,  
Clean Energy Business Council (CEBC)



**Olasimbo  
Sojinrin**

Nigeria Country Director,  
Solar Sister

# Discussants



**Fawzia  
Tarannum**

TERI School of  
Advanced Studies, India



**Jean-Christophe  
Carteron**

Director of Corporate  
Social Responsibility,  
Kedge Business School



**Prem Jain**

Professor in Physics and  
UNESCO Chair in Renewable  
Energy and Environment  
University of Zambia



**Kenneth  
Walz**

Director, Center for Renewable  
Energy Advanced Technological  
Education (CREATE)  
Madison Area Technical College,  
USA



**Cheryl Desha**

Associate Professor  
Griffith University,  
Australia



**Ahmed  
Benlarabi**

Responsible for PV  
Systems at IRESEN,  
Morocco



**Hideaki Ohgaki**

Professor of Institute of  
Advanced Energy,  
Graduate School of  
Energy Science,  
Kyoto University, Japan



**Andreas Blom**

Practice Manager  
The World Bank's Education  
Global Practice, Middle East  
and North Africa

# Opening & Closing Remarks



**Paul Noumba Um**

Regional Director of Infrastructure  
MENA, The World Bank



**Mari Nishimura**

Programme Officer, United Nations  
Environment Programme

# Master of Ceremonies & Moderators



**Tu Chi  
Nguyen**

Energy Economist,  
The World Bank's Energy  
Global Practice, Middle  
East and North Africa



**Erik Fernstrom**

Practice Manager,  
The World Bank's Energy  
Global Practice, Middle  
East and North Africa



**Debra Rowe**

President, US Partnership for  
Education for Sustainable  
Development

# Webinar Organizing Team



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Senior Energy Specialist,  
The World Bank's Energy  
Global Practice, Middle East  
and North Africa



**Tu Chi  
Nguyen**

Energy Economist,  
The World Bank's Energy  
Global Practice, Middle East  
and North Africa



**Mari Nishimura**

Programme Officer, United  
Nations Environment  
Programme



**Alona  
Kazantseva**

Energy Consultant,  
The World Bank



**Yao Zhao**

Energy Consultant,  
The World Bank



**Debra Rowe**

President, US Partnership for  
Education for Sustainable  
Development

# Webinar Recording & Resources

## Webinar Recording:

[https://1930181.mediaspace.kaltura.com/media/Connecting+Sustainable+Energy+Businesses+with+Education++Getting+the+Workforce+You+Need-Feb+25%2C+2021/1\\_wwr7xuux](https://1930181.mediaspace.kaltura.com/media/Connecting+Sustainable+Energy+Businesses+with+Education++Getting+the+Workforce+You+Need-Feb+25%2C+2021/1_wwr7xuux)

## Resource Document:

<https://docs.google.com/document/d/1hwmyaJPI3reaPqLhI6Pwcmb7ngKw8AYEK8uJjesv8w4/edit>

