



**STUDENT ENERGY NEDUET  
CHAPTER'S  
CURRENT TENURE REPORT  
2020-2021**

## **Executives of Student Energy NEDUET Chapter for the Tenure 2020-2021**

**Kanza Bashir – President**

**Ifrah Saleem – Executive Vice President**

**Shaheryar Ali – Secretary**

**Malaika Jabeen – Outreach Coordinator**

### **Faculty Advisors**

**Dr. Javed Haneef**

*Ph.D, University of Leeds, UK*

*Assistant Professor,*

*Department Incharge,*

*Petroleum Engineering Department,*

*NED University of Engineering and Technology, Pakistan.*

**Mr. Mohsin Yusufi**

*MS, Universiti Teknologi PETRONAS, Malaysia*

*Lecturer,*

*Petroleum Engineering Department,*

*NED University of Engineering and Technology, Pakistan.*

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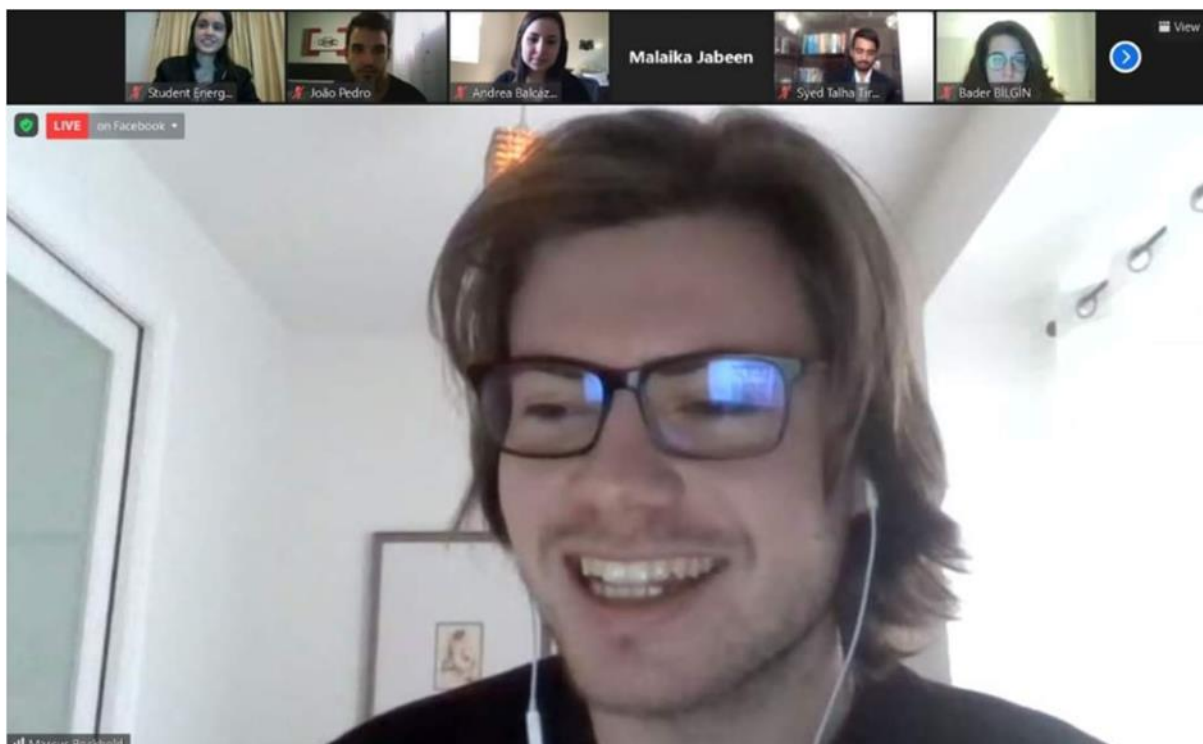
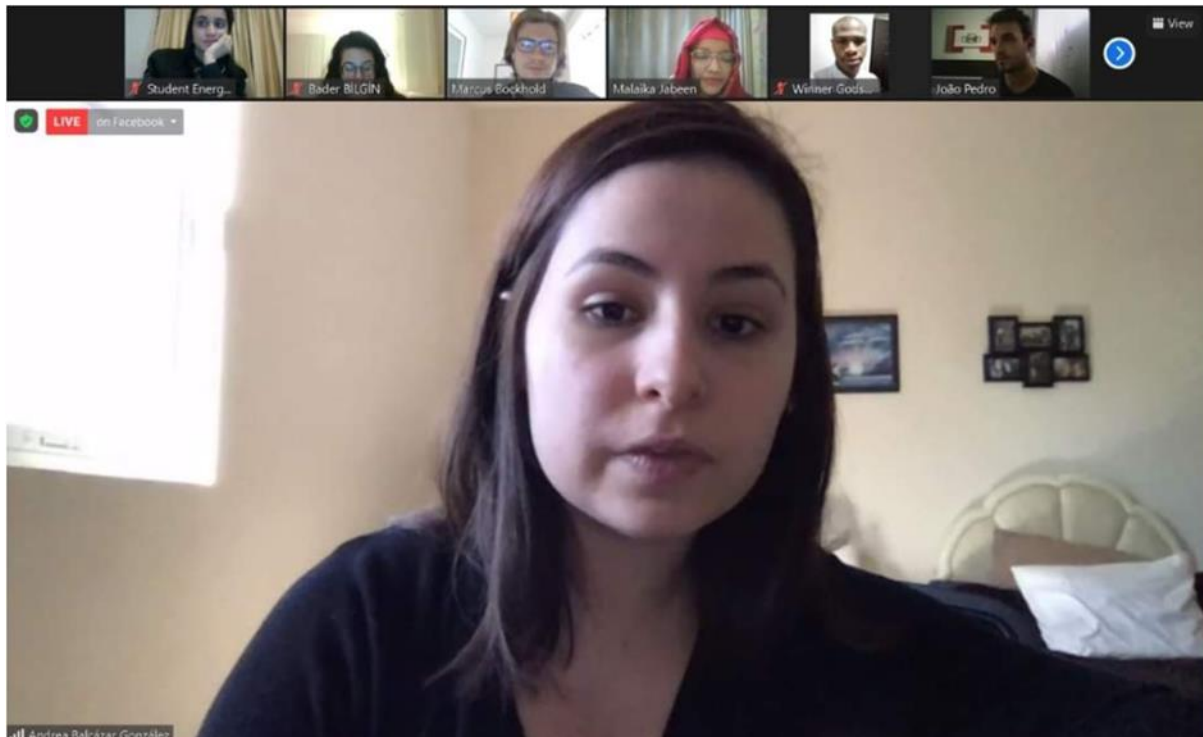
## Introduction

Student Energy NEDUET Chapter (SENC) is always looking to provide such opportunities, where students can learn, grow and can increase their intellectual level. We have arranged numerous informative sessions till date and planned furthermore. As the world fights against pandemic and all the operations are on a break, we took this as a challenge and arranged virtual meetings/ webinars, technical sessions, free online courses and talks with the professionals. Our chapter consisted of more than 50 active working body members, including the executives, vice presidents and team leads. The details of all the events conducted by Student Energy in University are mentioned below:

### 1. Orientation Session with Student Energy Chapters 20<sup>th</sup> December 2020

The new tenure started their exciting journey with the virtual gathering of student energy chapters' leaders which included Kanza Bashir (current President, SENC), Syed Talha Tirmizi (Founder & Former President, SENC), Andrea Balcazar Gonzalez (Former President, Mexico), Winner Godson (Secretary, Nigeria), Paola Flores Carvajal (President, Bolivia), Joao Pedro (Founder & President, Brazil), Bader Bilgin (President, Turkey). The event was also graced with the presence of Mr. Marcus Bockhold (Global Community Manager, Student Energy).





## **2. Lecture on “Understanding Electricity Value Chain and Integration of Renewables”, by Mrs. Hira Wajahat Malik (Leading Project at Stimulus, Founder at the Clean Tech Republic) on 28th December 2020**


The lecture was well attended by the students, virtually held on zoom. Mrs. Hira Wajahat gave a deep insight into the electricity grid system of Pakistan and the role of renewable energy and its share in the energy production mix. There was also an interesting question/answer session

which brought interesting new concepts into consideration and left the audience satisfied with a good knowledge appetite.


REC

## Our discussion today

- Understand the concept of value chains
- Discuss the electricity value chain for Pakistan
- Opportunities to integrate renewables in the electricity value chain



Hira Wajahat's screen



## Suitable Business Models in Pakistan

Small Scale On-Grid Business Models



## Support Mechanisms

- Net Metering
- Up Front Feed-In Tariffs
- Wheeling and Banking
- Relaxation of import duties
- Land allocation
- Standardized templates
- Electricity grid improvements



## Suitable Business Models in Pakistan

Small Scale PV Off-Grid Business Models



### 3. Webinar on “How to Optimize your Resume and Social Media Presence” by Mr. Pietro Galli (Mechanical Engineer at Baker Hughes) on 10<sup>th</sup> January 2021

Student Energy organized a well-received online live webinar by Mr. Pietro Galli, who's an engineer, a business storyteller, and a startup enthusiast helping people in their careers and business through his "Tales of Startup. The students got to know how to use LinkedIn effectively and write their distinct resumes which can attract the attention of the recruiters.

LIVE on Facebook

Student Energ... Pietro Galli Muhammad J... Aun Ali

**Pietro Galli**  
Operation Management Engineer

Education: BSc in Operation Management (2014 - 2016)

EF Experience: EF Experience Manager for university students

Skills: People's Management, Public Speaking, Cross-Functional Work, Enthusiasm

Education: Double Master's Degree Mechanical Engineering, Politecnico di Torino, University of Illinois at Chicago

Projects & Achievements:
 

- Managed global raw material BPO saving \$250k
- Spending communication: defects reduced by 80%
- Optimized Tracking System saving \$35k a year

- SHORT
- CLEAR
- NUMERICAL RESULTS

**Nesrine**

LinkedIn: nesrine

DOB: 30

Education:
 

- 2018, Year Master (Petroleum Geophysics) (Faculty of Oil and Chemicals/Bourmes)
- 2015, Bachelor Degree (Seismic Geophysics) (Faculty of Oil and Chemicals/Bourmes)
- 2013, Project: Seismic acquisition 3D | Final Grade: 82/100
- 2012, Scientific Baccalaureate | Final Grade: 16.12/20

Experience:
 

- 2019, SONATRACH Exploration, Bourmes, Petrophysicist - OCT: **Seismic volume calculation 2 weeks**
- 2018, SONATRACH Exploration, Bourmes, **Lead**: **Seismic Interpretation**
  - 2 weeks training
  - Perceptual evaluation using CLIENT
  - Workshop with knowledge
  - 8 days at Schlumberger workshop and ON
  - 3 days at HSE
  - 2 days at Baker Hughes
  - 1 day at Weatherford
- 2018, ENAGO (SONATRACH), Geophysicist Intern (Seismic Data processing)
- 2018, ENAGO (SONATRACH), **Seismic acquisition 3D**

Extracurricular Activities:
 

- 2018, **Cellule académique de l'EF - Bourmes**, Student Chapter Member | **MSA (MSA 21) EF**

Technical Skills / Soft Skills / Languages:
 

- Effective communication, hard worker, quick learner, team worker, challenge, good working under pressure
- Software: MATLAB, SAS, MONTAJ, ARC, GIS, Matlab, Microsoft Office
- Languages: Arabic (Mother Tongue), French, English, Turkish

**Nesrine Elbah**  
Petroleum Geophysicist

ABOUT ME: "Petroleum engineer with multiple internship experiences. Confident with seismic and petrophysics processing. Experienced in events organization and public speaking, these skills helped me collaborate effectively in a fast-paced environment."

CONTACTS:
 

- 212 4300000
- en.nesrine@petro.com
- Via al caza mila
- enbah@ef

SOFTWARE:
 

- MATLAB
- ARC, GIS
- Photoshop
- Trinity

LANGUAGES:
 

- ARABIC: ██████████
- FRENCH: ████████
- ENGLISH: ████████
- TURKISH: ████████

WORK EXPERIENCE & ACTIVITIES:
 

- 2019, SONATRACH Exploration, Bourmes Petrophysicist - OCT: **Assess volume calculation**
  - In person lectures with industry experts
- 2019, SONATRACH Exploration Bourmes **Summer internship (multiple risks)**
  - Experience in multiple companies (Schlumberger, Baker Hughes, Weatherford)
  - Evaluation of an oil Well site experience plus background analysis
  - Workshop tools knowledge and software such as Techlog and Petrel
- 2018, ENAGO Bourmes & Bourmes **Masterand Geophysicist Intern & Seismic Acquisition**
  - Seismic Data processing
  - Native industries
  - Developed confidence with software Xai & Yxy
- 2018, **SEI ASSOCIATION (MULTIMEDIA SECTION)**
- 2015, Organized events for the University with 10k+ people
- Experience in writing articles
- Experience in speaking in public

EDUCATION:
 

- Faculty of Oil and Chemistry
- 2018, Master's degree: Petroleum Geophysics
- 2018, Bachelor Degree: Petroleum Geophysics
- 2013, Scientific Baccalaureate



# TOOLS FOR A GREAT RESUME

CANVA	MY PERFECT RESUME	PIETRO'S TEMPLATES
<ul style="list-style-type: none"> <li>● Free</li> <li>● Many templates</li> <li>● Not 100% customizable</li> </ul>	<ul style="list-style-type: none"> <li>● Fast</li> <li>● Many templates</li> <li>● Not 100% customizable</li> <li>● You need to pay</li> </ul>	<ul style="list-style-type: none"> <li>● Free</li> <li>● Few templates</li> <li>● 100% customizable</li> </ul>
		

**4. Lecture, “Mission to M.A.R.S” by Dr. Jonathan Trent (NASA AMES Research Scientist| Former Lead Scientist of Omega Project |Speaker of TEDx| University of California) on 6th March 2021**

Student Energy successfully held a Zoom webinar by Dr Jonathan Trent, who is a scientist, a biofuel guru, founder of the UpCycle Systems and a researcher of many fields some of them; which includes marine science, microbiology, environmental sciences, cell biology, medicine nanotechnology.

Since the lecture was allied to Mars thus he gave his spectators all the information of the life on Mars. He comprehensively explained how the micro-organisms have endured in the severe atmosphere of Mars. He also linked his research with the Project Omega. As the audience were pretty concerned to listen to his research on Algae and Plankton therefore he presented the research regarding it in a brief. At the completion of the lecture, the hosts and Academic Advisor Mr Prof Mohsin Yousufi warmly show gratitude to Sir Jonathan Trent and asked him to convey his last finishing sentences.

The webinar was very informative, exploring a range of topics .The webinar witnessed enthusiastic participation from the attendees during the Q and A session.



Recording **LIVE** on Facebook

# Consequences of Climate Change...

Share 7 A.A.4

## Researchers: Tibetan Glacial Melt Threatens Billions

46 Views 10 Comments 42 Shares

**nature**

### Tibetan glaciers are shrinking at their summits

For the first time, high-altitude Himalayan glaciers are melting rapidly, threatening the livelihoods of billions of people.

17 September 2014

By: Stephen A. Woodhouse

100% Volume

Recording **LIVE** on Facebook



100% Volume

Participants 100% Chat Share Screen Mute

Shuboyser Akbar

M

Student Akbar

Recording **LIVE** on Facebook



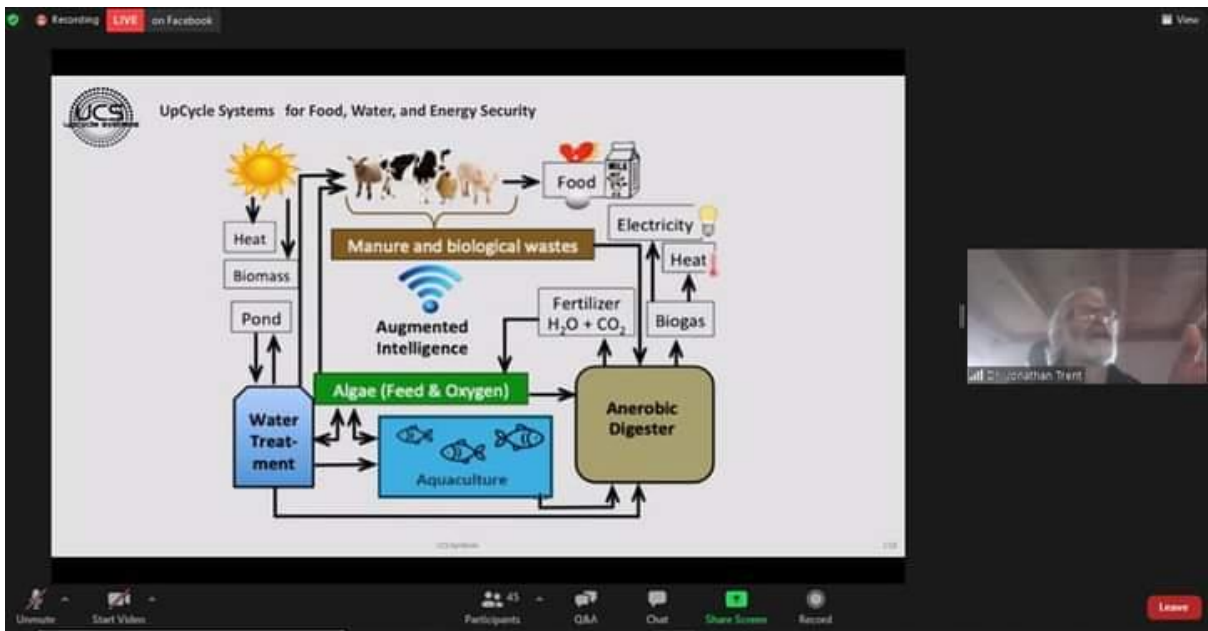
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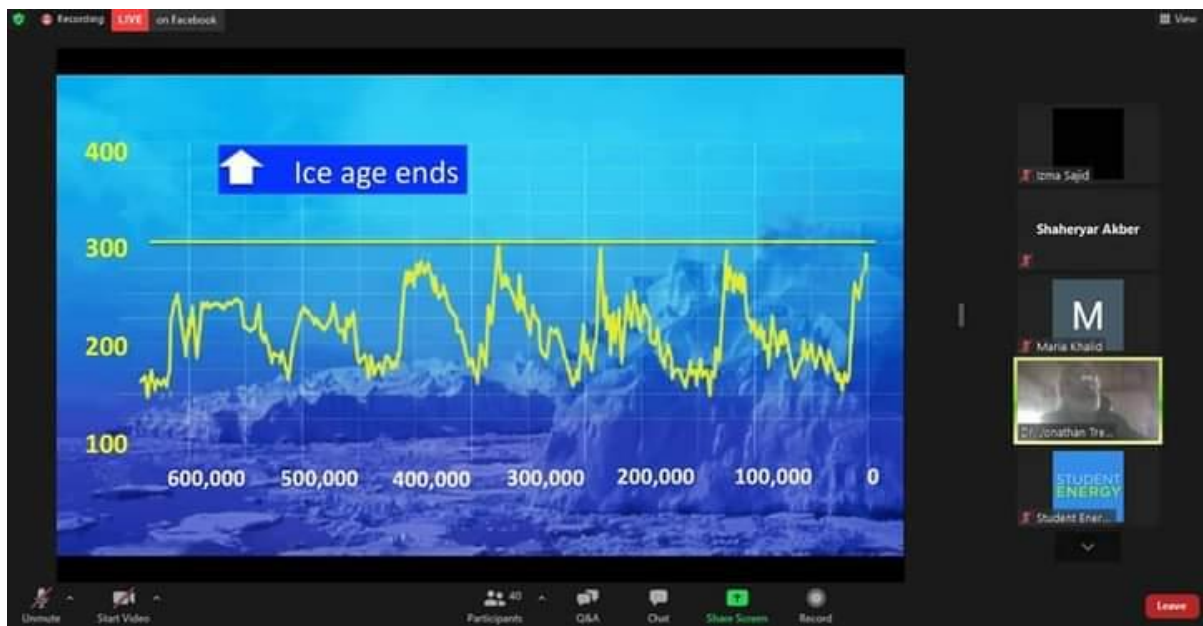
Colonial America

Dots = 1 million people

Population Connection

100% Volume





## 5. “Global Youth Energy Outlook” on 15th March

Student Energy, spreading awareness about sustainable energy came up with The Global Youth Energy Outlook (GYEO) program. It is a questionnaire, available in 9 languages, that aims to bridge the gap between young people and the world so that we can cooperate in order to transform the global energy system. We also aim to get the youth’s perspective, their opinion on sustainable energy transition and aim to help them understand that energy system represents a unique challenge and opportunities globally.

# TAKE OUR QUESTIONNAIRE



**THE QUESTIONNAIRE IS ONE OF THE WAYS WE'RE ENGAGING YOUTH IN OUR GLOBAL YOUTH ENERGY OUTLOOK. TAKE THIS 20 MINUTE QUIZ AND BE ONE OF THE 50,000 YOUTH VOICES TO HELP SHAPE FUTURE ENERGY POLICY IN YOUR REGION.**

Visit: <http://bit.ly/SE-GYEO>

The logo for Student Energy, with the text "STUDENT ENERGY" in a bold, sans-serif font, and "BY THE UNIVERSITY" in a smaller font below it.

**JOIN THE GLOBAL YOUTH ENERGY OUTLOOK**

Take the questionnaire today:  
[www.bit.ly/gyeo](http://www.bit.ly/gyeo)

30 minutes

9 languages

Shape the future of energy

A square QR code located in the bottom left corner of the graphic.

Scan QR Code for filling up the questionnaire

A stylized globe icon with a grid pattern, located in the bottom right corner of the graphic.

## 6. Interactive Event “Nashta Meet up” on 28<sup>th</sup> March 2021

As we know the last year that has been passed in the lockdown due to the outspread of fatal virus COVID -19. Fortunately, the Government had tried to control this rapid spread of the virus, because of which all the Educational Institution were allowed to open. This gave us a good

opportunity to have a meet up at breakfast. It was held on March 28, 2021. Here are some highlighting images of the event.





### **7. "Ration Drive" by Student Energy at NEDUET on 2<sup>nd</sup> May 2020**

By the grace of Almighty Allah and with help of some humble people, Student Energy was able to conduct a successful ration drive in Ramzan during the pandemic on Sunday, 2<sup>nd</sup> May 2021. We helped approximately 20+ families by providing them with necessary items, keeping the spirit of Ramzan alive.





### 8. "Iftar Drive" by Student Energy at NEDUET on 9th May 2020

Due to the effect of COVID-19, many people lost their job thus wouldn't be able to have proper iftar during the Maghreb. Student Energy at NED University, after realizing the fact has arranged an iftar drive on the 9<sup>th</sup> of May 2020 with the help of donations. Some glimpses of iftar drive can be seen below.





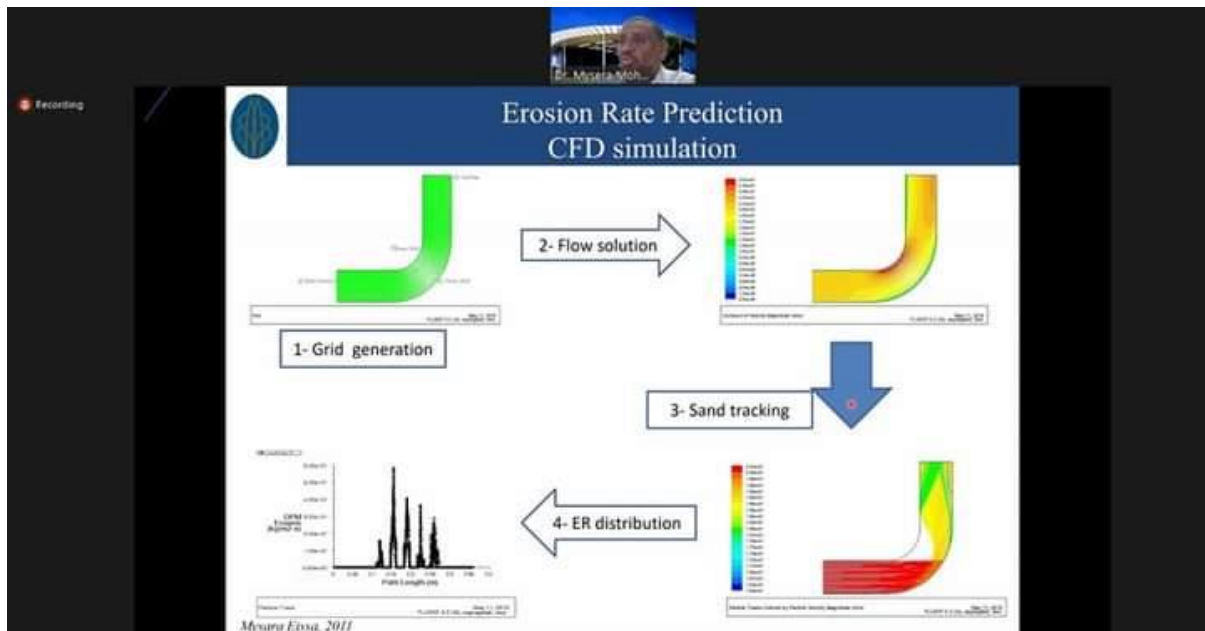


### 9. Webinar on “Sand Erosion and Erosion-Corrosion in the Oil Industry” by Dr. Mysera Mohyaldinn on 26th April 2021

Student Energy successfully held a Zoom webinar by Dr Mysera Mohyaldinn, who is currently working as a Senior Lecturer at UTP, Malaysia. Having worked with China Petroleum Pipeline Engineering Co. and Petroenergy E&P Co. in Fula Field Export Pipeline Project in Sudan, Dr. Mysera had a lot of industrial experience to share.

The webinar was very informative, exploring a range of topics such as erosion rate prediction, parameters affecting erosion-corrosion and CO<sub>2</sub> corrosion to name a few. Mechanisms and electrochemical reactions were also discussed at length. The webinar witnessed enthusiastic participation from the attendees during the Q and A session.

Flow	Sand	Target material
<ul style="list-style-type: none"> <li>• Flow velocity.</li> <li>• Fluids properties.</li> <li>• Concentration and partial pressure of corrosive agents.</li> <li>• pH</li> </ul>	<ul style="list-style-type: none"> <li>• Mass flow rate</li> <li>• Particle size.</li> <li>• Particle shape.</li> </ul>	<ul style="list-style-type: none"> <li>• Geometry</li> <li>• Material hardness.</li> <li>• Material ductility.</li> <li>• Angle of impingement.</li> </ul>



**Corrosion Mechanisms  
Electrochemical reactions**

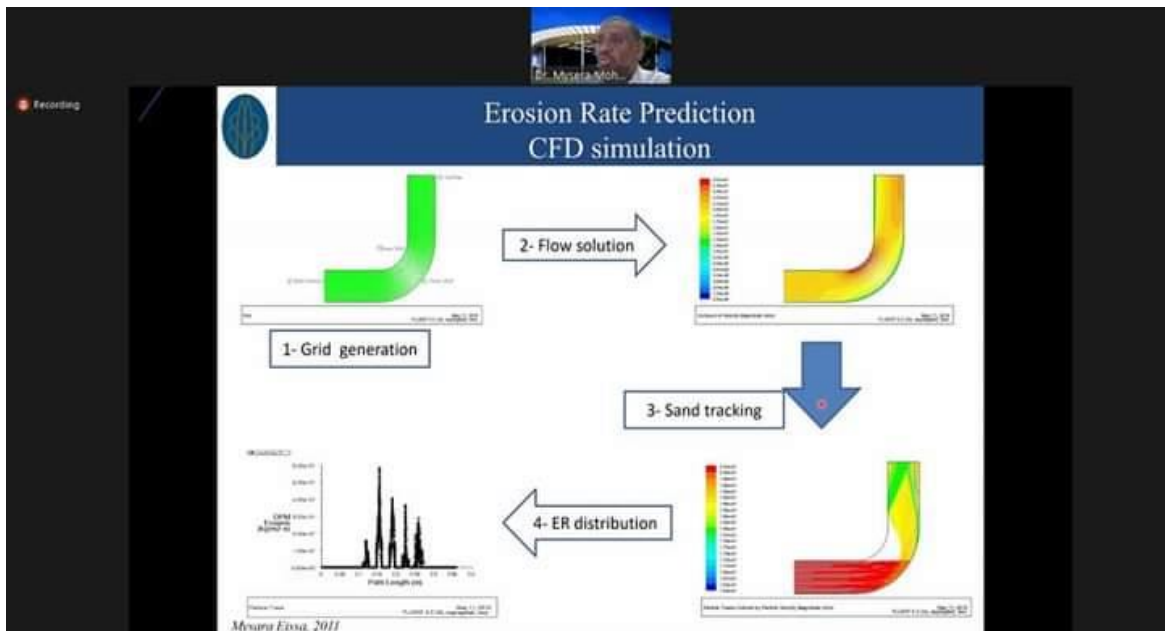
- An example of electrochemical reaction is the attack of zinc by hydrochloric acid

$$\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$$

- Solid zinc reacts with hydrochloric acid to form zinc chloride and hydrogen gas

$$\text{Zn} + 2\text{H}^+ \rightarrow \text{Zn}^{2+} + \text{H}_2$$

Anodic reaction	Cathodic reaction
$\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$	$2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$



- ### Summary and Conclusions
- Sand production leads to erosion of subsurface, surface, and piping components.
  - Sand flow in a corrosive fluids causes erosion-corrosion.
  - Early and accurate erosion-corrosion prediction and simulation is a key for operating safely at no (or allowable) erosion conditions.
  - Pure erosion prediction can be performed using empirical models, semi-empirical models, or CFD simulation methods.
  - Erosion-(corrosion) measurement at simulated conditions is a more reliable alternative for investigating service erosivity and analyzing the effect of flow characteristics on erosion .
  - The measurement can be conducted using lab-scale flow loops with capability of mimicking the real dynamic conditions.

### 10. Global Calls for the month of April and September 2021

SENC conducts global monthly calls where every chapter from around the world gets to share their progress and if there is a beginning of a new chapter anywhere, it is also acknowledged through this global call.

SENC conducted two global calls in the months of April and September which were met with zealous participation and engagement. Many Indian, North American, Italian and Malaysian chapters of Student Energy were collaborated for the calls.

In the first call held in April 2021, where our general secretary Shahreyar Ali and two vice presidents, Zunaira Nadeem and Syed Aun represented us. In this call we shared our progress since the beginning of new tenure 2020-2021. This call went over the resume and LinkedIn building techniques and tips that were imparted previously by Mr. Pietro Galli as well as a thought provoking webinar “Mission to Mars” delivered by Dr. Jonathon Trent on bio fuels, food chain cycles and utilization of renewables was touched upon.

In the second call held in September 2021, the session with Ms. Hira Wajahat on “Understanding Electricity Value Chain and Integration of Renewables” was elaborated upon and the key points of the informative webinar were reiterated and thoroughly discussed for the purpose of an intellectual discourse where perspectives from different countries could collaborate. Our two vice presidents, Zunaira Nadeem and Syed Aun represented our chapter, where we also shared our missions to aware people about sustainable energy.

Additionally, the establishment of five new chapters around the globe, one of which was established in CECOS University, Pakistan, were announced and warmly welcomed by the Student Energy family. Future projects and prospects for the organization were also highlighted, in the hopes to achieve its aim of empowering next generation leaders and accelerating the transition towards sustainability.



## Highlights from the Session

### Improving your Resume

**THE 2 TYPES OF RESUME**

**VISUAL** vs **WORD**

- SHORT
- CLEAR
- NUMERICAL RESULTS
- NON TECHNICAL

**TOOLS FOR A GREAT RESUME**

CANVA	MY PERFECT RESUME	PIETRO'S TEMPLATES
• Free	• Free	• Free
• Many templates	• Many templates	• Few templates
• Not 100% customizable	• Not 100% customizable	• 100% customizable
	• You need to pay	

## Discussing about the Bio Fuels, Project, Food chain cycles and Importance of Renewable

Ice age ends

Environment: Wastewater treatment & Carbon Capture

Energy: Solar, Biofuels, Wind, Wave

Water: Wastewater to Drinking Water

Food: Aquaculture

### INTEGRATION OF RENEWABLES:

Following points were discussed regarding the Integration of Renewables:

- Major renewable energy production ways
- Prospects and potential of renewable energy transition in Pakistan.
- Role of energy in the socio-economic development of a country.
- Policy and financial barriers which could offset the benefits of clean energy transition goals

#### Renewable Energy Market Potential

\$3.2 - 408,630 MW; W&B - 84,900 MW  
 Total demand: 813,181 MW  
 % met by 2025  
 JAC policy 2019 - 39% renewables to be grid by 2030  
 Copyright of Topal

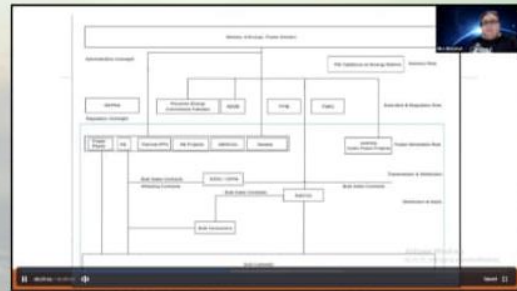
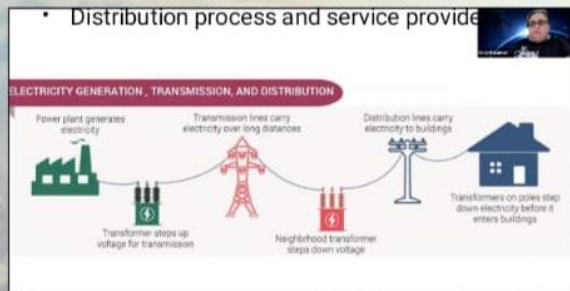


## ELECRICITY VALUE CHAINS:

A thorough explanation on the following topics was shared by the speaker:

- To recognize the idea of cost chains
- To discuss the electricity value chain for Pakistan.

- Distribution process and service provide



## ABOUT TODAY'S PRESENTATION:

### Points to be discussed:

- Student Energy held an informative webinar session with our guest speaker, Miss. Hira Wajahat.
- Main focus of the session was about understanding **Electricity Value Chains and Integration of Renewables**.

### Our discussion today

Understand the concept of value chains  
 Discuss the electricity value chain for Pakistan  
 Opportunities to integrate renewables in the electricity value chain



### Value Chains

Step-by-step **business** model for transforming a product or service from idea to reality  
 Increase a business's efficiency to deliver most **value** for least possible cost

