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Dean, School of Engineering
Kathmandu University

WELCOME MESSAGE

Welcome to the National Renewable Energy and Policy Symposium 2023, where innovation and collaboration converge to shape a sustainable future. It is with great pleasure and excitement that I extend my warmest greetings to each and every one of you. We are thrilled to have such an esteemed gathering of experts, researchers, policymakers, and industry leaders who are passionate about advancing renewable energy and shaping sustainable policies. This symposium serves as a platform for insightful discussions, knowledge exchange, and collaborative efforts towards shaping the renewable energy landscape in Nepal. We are honored to host this symposium as the first event in a series that will continue to explore and address the pressing challenges and opportunities in Nepal's renewable energy sector. Through critical evaluations, thematic discussions, and constructive debates, we aim to catalyze positive change, identify effective policies, and pave the way for a sustainable energy

future. The program presents an exceptional opportunity for collaboration, knowledge sharing by bringing together experts, academicians, industry, stakeholders from diverse backgrounds, we hope to foster a vibrant atmosphere of shared learning and mutual inspiration, ultimately contributing to a sustainable and greener future.

I would like to express my heartfelt gratitude to the GridVille Program, organizing committee, our sponsors, and all those involved in making this symposium a reality, and extend my warmest welcome to each and every one of you. Let us embark on this journey of exploration, innovation, and collaboration, with the shared goal of accelerating the transition to a renewable energy future. May this symposium be a platform for illuminating discussions, transformative ideas, and a catalyst for positive change. NAMASTE!!!

EXECUTIVE SUMMARY

The GridVille Program, a joint project between Kathmandu University (KU) and the Norwegian University of Science and Technology (NTNU), is dedicated to addressing the critical issue of energy access in Nepal. To effectuate its objectives, GridVille has been actively engaged in communities of Nepal, where there is little to no source of sustainable energy systems. Nepal being a country with higher potential in energy production through renewable sources, has still been unable to fulfil the national requirement. One of the challenges that can be seen is the lack of proper legal framework and its intervention. To recognize and solve such problems, there is an eminent need to understand the aspects of energy and its infrastructure from a multi-disciplinary approach. Engineers, policy experts, financial managers and

all the stakeholders, who have the technical expertise in this matter, must therefore come together to establish a sustainable energy market for Nepal. The *National Renewable Energy and Policy Symposium 2023* is thus an opportunity to discuss various aspects of energy, including production, distribution, and consumption, as well as the legal frameworks that govern the industry through multi-disciplinary perspectives. The discussion will be focused on the need for the assessment of national policies, interventions, local and regional support required for the technology transfer in Nepal with the expectation of potential sustainable renewable energy policy framework recommendations by the end of the symposium.

SYMPOSIUM OBJECTIVES

- Identify the technological preparedness for renewable energy systems in Nepal.
- Identify and discuss the policies and framework promoting renewable energy and its infrastructure.
- Build and promote network and partnership among the academicians, industry, policymakers and the stakeholders for the renewable energy development and the transition of Nepal.

EXPECTED OUTCOMES

- Framework for policy suggestions and interventions for sustainable energy in Nepal
- Technical feasibility and applicability of new renewable energy systems and its impact on Nepal
- Identification of risk and challenges and the mitigation through possible collaborations between business sectors, government, and academia.

SYMOSIUM OVERVIEW

Climate change impacts like erratic weather and increased vulnerability to natural disasters highlight the need for transitioning to renewable energy sources. Addressing Nepal's energy challenges requires a multifaceted approach that considers various sectors. Renewable energy policies should align with Nepal's goals in areas like the economy, food security, and the environment. Renewable sources reduce greenhouse gas emissions, air pollution, and ecological degradation, aligning with Nepal's commitment to biodiversity and ecological balance. Nepal can become a regional renewable energy leader, fostering economic cooperation and integration. By adopting appropriate policies, Nepal can capitalize on its resources, engage in energy trade, and contribute to regional security and prosperity.

The symposium marks the beginning of a planned series of events focused on renewable energy and its policies is an excellent opportunity to bring together engineers, policy experts, financial managers, who have the technical expertise and students to discuss the current state of energy production and policies. The symposium focuses on addressing the urgent need for sustainable energy solutions and supportive policies in the country. An important focus of the symposium is to highlight the significance of regional and local support for renewable energy initiatives. Strategies for mobilizing

resources, engaging communities, and building partnerships are discussed to accelerate the transition to sustainable energy systems at both grassroots and national levels. By involving local stakeholders and considering the socio-economic context, the symposium aims to ensure the relevance and effectiveness of renewable energy policies and projects. The symposium emphasizes the importance of technology transfer in Nepal's energy sector. The presenters will share insights on the latest advancements in renewable energy technologies, successful implementation experiences, and areas for potential collaboration and innovation. By facilitating technology transfer, the symposium aims to enable the cost-effective and efficient adoption of renewable energy solutions in Nepal, aligning with the country's sustainable development goals.

China has demonstrated its commitment to renewable energy by implementing robust policies such as feed-in tariffs, renewable portfolio standards, and renewable energy certificates. These measures have stimulated significant investment in renewable energy projects, leading to a rapid expansion of wind, hydro, hydrogen and, solar power capacity in the country. Norway, on the other hand, has prioritized

the development of hydroelectric power

established strong support mechanisms, including feed-in tariffs and tax incentives, to promote renewable energy adoption. India has set ambitious renewable energy targets to increase the share of renewables in its energy mix. The target is to achieve 450 gigawatts (GW) of renewable energy capacity by 2030, including 280 GW from solar, 140 GW from wind, and 10 GW from bioenergy. Other countries including Germany, Brazil, New Zealand US and so on have also launched impressive and ambitious energy policies. By examining and observing such policies, Nepal can identify key elements of effective renewable energy policies and tailor them to its own unique context, accelerating its transition to a sustainable energy future.

The international scenario emphasizes the importance of renewable energy and mitigating climate change. As a signatory to international agreements and commitments, including the Paris Agreement, Nepal has a responsibility to align its energy policies with global sustainability objectives. Nepal's current energy situation heavily relies on fossil fuels and traditional biomass, causing

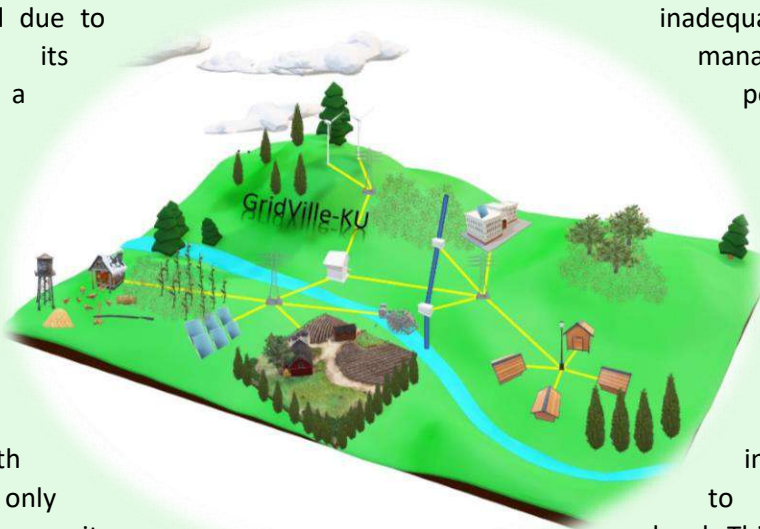
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environmental degradation and hindering economic growth. the environmental impact of fossil fuel use brings health issues and exacerbates climate-related concerns, such as the melting of snow and glaciers, which threaten water resources and agricultural productivity. By adopting robust renewable energy policies, Nepal can mitigate emissions, bolster energy security, drive economic growth, safeguard public health, and protect its environment, ensuring a sustainable and prosperous future. Lessons learned from countries that have effectively addressed the energy trilemma by prioritizing renewable energy can guide Nepal in formulating effective policies tailored to its own unique circumstances

Therefore, National Renewable Energy and Policy symposium is a significant platform for interdisciplinary dialogue, collaboration, and knowledge-sharing. By critically evaluating existing policies, exploring various aspects of renewable energy, emphasizing regional and local support, and promoting technology transfer, the symposium aims to drive positive change, create new energy policies and contribute to Nepal's transition to a sustainable and resilient energy future

ABOUT GRIDVILLE

GridVille is a joint NTNU-KU interdisciplinary program that aims to design and develop sustainable electricity system while also providing development assistance to Nepal's energy deficient rural communities. Constant increment in energy demand and phasing out of non-renewable energy is becoming a challenge for developing countries like Nepal. The consequent concern on production, transport and storage of electricity raised due to inadequate sustainable infrastructure and its management with lack of investment has built a positive interest to operate the program. Regarding such challenges GridVille intends to develop an electricity supply chain system through micro-grid communities by the system in involvement of students direct



who also provide training users. Through community collaboration both institutions can transfer the knowledge not only to respective institutions but also to the community level. This program helps to enhance the economic and social development of the community by creating the better opportunities to the local people of the project areas uplifting their living standard and livelihood.

Besides NTNU-KU collaboration projects, GridVille carries the same spirit as carried by the Community Engagement Division (CED) at KU-of bringing the knowledge and product developed at KU for the service and use at the community level. With the vision to be the conveyor of knowledge and product developed at KU for the service and use at the community level creating a sustainable circular economy in the region, our mission of this program is to develop and deploy solar wind energy and micro-hydro in Nepal's remote areas through student mobilization

Work Packages

Work Package 1	Work Package 2	Work Package 3
Develop engineering products and services to provide reliable power supply to the off-grid community of Nepal	Identify and restore the energy related projects installed in past for socio-economic benefits	Incubate existing projects as the outreach sites for boarder community engagement and education activities

GRIDVILLE GOALS

WHAT?

GridVille's mission is to develop and deploy solar wind energy and micro-hydro in Nepal's remote areas. These microgrids are not connected to the national grid and are located far from power plants, resulting in a self-sustaining energy-independent environment.



WHO?

Many rural villages in Nepal still do not have access to electricity. These microgrids will be installed in areas where energy is scarce. As a result, people in such areas will have access to a sustainable and renewable energy source



WHY?

These systems aim to establish reliable and sustainable community electricity supply chains, overcoming the limitations of insufficient infrastructure and inadequate investment, by providing access to affordable and reliable energy

GRIDVILLE PROJECTS

Helambu Micro-Hydropower Project



GridVille-KU plans to develop micro-hydropower of 20kWp capacity in order to enhance electricity availability to be utilized for public purposes. The objective of the project is to promote clean and environment friendly energy technology and to increase energy efficiency for usage for domestic purposes by providing electricity from isolated Micro Hydropower Plant.

Thingan Tri-Hybrid Energy System



The Tri-Hybrid system, implemented by KU in Thingan in 2013, is currently non-operational therefore, GridVille intends to resurrect the PV-wind system in order to increase the power supply. The objectives of the project include to perform refurbishment works on solar photovoltaic and wind systems to bring them at operational status and to install an efficient mode of irrigation system for agriculture.

About Energize Nepal

Energize Nepal Program (ENEP) was conceptualized on 2016 to accelerate the development of Nepalese hydropower and other renewable energy sector. The program aims to develop new and innovative technologies to reduce cost, increase efficiency contextual to Nepalese conditions. The program intends to enhance human resource development to carry out research as well as effectively apply research results to solve challenges of hydropower and other renewable energy development in Nepal and the region. The Program is managed by Kathmandu University (KU), Nepal, in partnership with Norwegian University of Science and Technology (NTNU), Norway, SINTEF Energy Research (SEfAS), Norway, and Hydro Lab Pvt. Ltd., Nepal funded by Norwegian Ministry of Foreign Affairs, Norway.

ENEP supports research based industrial development in Nepal. The program provides financial support to collaborative R&D projects related to Renewable Energy Technology (RET), planned, and implemented by R&D institutions in Nepal in cooperation with local and foreign institutions and industries. ENEP support the business enterprises as well as provides academic support to Ph.D. and masters students for their thesis research work in the field of renewable energy.

Objectives

The primary objective of EnergizeNepal Program is to improve capacity of research and education required for development of renewable energy sector in Nepal and the region. The components objectives are:

- The objective of the Hydropower Development Component is to develop research and education capacity to support hydropower development in Nepal and the region.
- The objective of the RENP II Component is to develop applied search capacity required for renewable development in Nepal and in region.
- To promote and support research as well as subsequent commercialization of these technologies through institute- industry partnership in collaboration with wide ranging of stakeholder, and also support business incubation.

Major Targets

- Develop 22 new products and services related to renewable energy technologies.
- Involve 32 national and international private sector industries and research institutes in research and commercialization.
- Support 15 Business enterprises based on technology transfer for incubation & innovation in renewable energy.
- At least train 44 researchers and students through R&D projects.

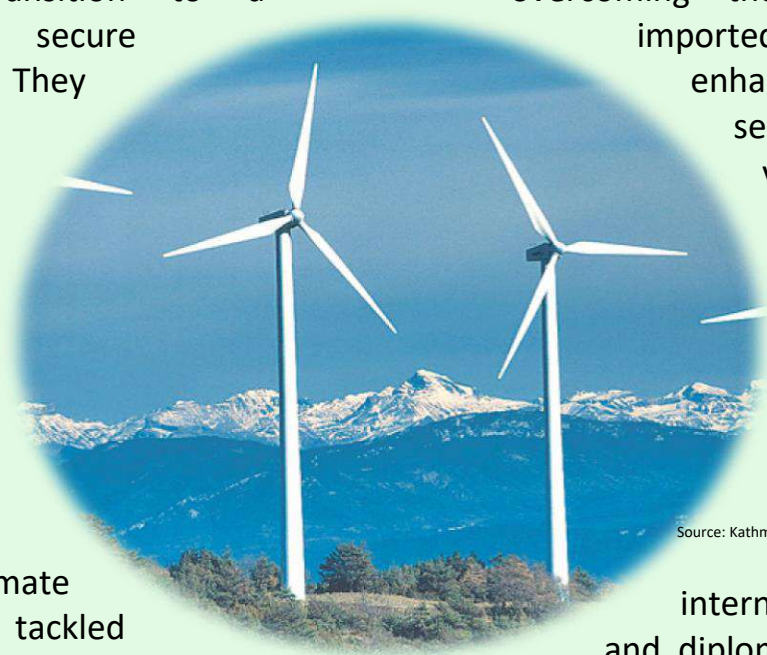
The development objective of EnergizeNepal Program is to improve capacity of research and education required for development of renewable energy sector in Nepal and the region.

SYMPOSIUM THEMES

1. Overview of Energy Policies

Energy policies play a crucial role in shaping a country or region's energy landscape, guiding investments and driving the transition to a sustainable and secure energy system. They address environmental sustainability, economic development, energy security, and social equity. Environmental challenges, particularly climate change, can be tackled through policies which promote renewable energy adoption and energy efficiency, helping on the reduction of greenhouse gas emissions. Such policies support clean energy technologies and set renewable energy targets, contributing to global climate change mitigation efforts.

Energy policies are also vital for economic development and energy security. They help creating a stable regulatory environment, attracting investments in the energy sector and stimulating innovation, job creation, and economic growth through clean energy



Source: Kathmandu Post

technology development. By diversifying the energy mix and promoting our domestic resources, these policies help overcoming the dependence on imported fossil fuels, enhancing energy security and reducing vulnerability to global energy market fluctuations and geopolitical risks.

Energy policies also foster

international cooperation and diplomatic relations. In a globalized energy market, countries engage in energy diplomacy, collaborating on cross-border projects, and negotiating the energy agreements. Such policies contribute to energy security, facilitate technology transfer, and promote interconnected energy infrastructure too. By promoting dialogue and cooperation, energy policies address common challenges; including energy access, climate change, and sustainable development, while strengthening diplomatic ties between nations.

2.Necessity of Development of Energy Infrastructures

Energy infrastructure development is essential for efficient and reliable energy supply, encompassing the physical assets and systems needed for energy production, transmission, distribution, and consumption. It is crucial for meeting the growing energy demand, ensuring energy security and transitioning to a more sustainable and reliable energy system. Factors driving infrastructure development include economic growth, energy security, environmental sustainability, and social welfare.

Power plant construction and expansion form a crucial aspect of energy infrastructure development, ensuring diverse energy sources like fossil fuels, nuclear power, and renewable (solar, wind, hydro) meet the growing electricity demand. Efficient transmission and distribution networks, including lines and substations are essential for transport electricity over long distances and deliver it to end-users from power generation sources, ensuring reliable supply. Updating and expanding the grid infrastructure help minimize the transmission loss, improve system reliability, and enable integration of renewable energy sources.



With the increasing share of intermittent renewable energy sources like solar and wind, energy storage technologies and grid integration solutions become essential for balancing supply and demand. Developing energy storage infrastructure, such as battery systems or pumped hydro storage, allows excess energy to be stored and utilized during periods of high demand or low renewable generation. Energy infrastructure should also focus on energy efficiency measures and demand-side management initiatives. This includes promoting energy-efficiency buildings, appliances, and industrial processes, as well as implementing demand response programs to manage peak demand.

3. Renewable Energy and Environment

Renewable energy, often referred to as a clean energy comes from the natural sources or processes that are constantly replenished. The major sources of renewable energy include solar energy, wind energy and hydro energy. It plays a vital role in combating climate change, pollution, and promoting environmental sustainability. It offers a lower carbon footprint compared to fossil fuels, bringing numerous environmental benefits. This article explores the relationship between renewable energy and the environment, focusing on its positive impacts and considerations.

Renewable energy excels in reducing greenhouse gas emissions, unlike fossil fuels. Sources like solar, wind, hydro, and geothermal power don't emit carbon dioxide or other harmful pollutants during operation. By replacing fossil fuel-based electricity generation, countries can significantly cut carbon emissions and address the challenges of climate change, rising temperatures,

extreme weather events, and sea-level rise.

Moreover, renewable energy sources have a positive impact on air quality and public health. Fossil fuel combustion releases pollutants like particulate matter, nitrogen oxides, and sulfur dioxide, causing smog, respiratory diseases, and premature deaths.

Transitioning to renewable energy reduces air pollution and improves public health outcomes. For instance,

replacing coal-fired power plants with wind or solar farms decreases sulfur dioxide emissions, a major contributor to acid rain and respiratory illnesses.



4. Prospects of Energy Transition

The global shift from fossil fuels towards renewable energy is vital for addressing the most crucial problem existing which is climate change as renewable energy are cleaner and more sustainable source of energy which is absolutely essential for reducing reliance on fossil fuels, and promoting sustainable development. The transition is also essential to enhance energy security reducing dependence on foreign energy sources and stabilizing the energy prices. The transition involves replacing conventional sources such as coal, fossil oil, and natural gas with renewable alternatives like solar, wind, hydro, and geothermal power and also increasing the deployment and utilization of the related technologies. This transition is very crucial for a low-carbon economy and a sustainable future. Renewable energy brings numerous benefits not only from the environmental aspect but also from the economical aspects. It mitigates climate change by reducing greenhouse gas emissions. Unlike fossil fuels, renewables barely release harmful pollutants. This shift of energy enhances the energy security by using widely available and domestically sourced resources, which reduces the dependence on volatile imports.



The renewable energy transition fosters technological advancements, driving innovation in renewable technologies and benefiting other industries as well. Continued technological advancement have made renewable energy increasing competitive with fossil fuels. Research and development in this sector lead to breakthroughs in energy storage and grid integration.

OUR KEYNOTE SPEAKERS

Mr. HITENDRA DEV SAKYA

Mr. Hitendra Dev Sakya is the Managing Director of Nepal Electricity Authority. With extensive experience and expertise in the energy sector, he has played a pivotal role in the development of Nepal's hydropower projects and engineering services.

Starting his career at Nepal Electricity Authority (NEA) in 2045 BS, Mr. Sakya has held various important positions, including Director of the System Planning Department at NEA and Power Sector Specialist at the Office of the Millennium Challenge Nepal. He has also served as an Expert on Mini grid at the Alternative Energy Promotion Centre (AEPIC), showcasing his diverse contributions to the energy landscape of Nepal.

During his professional journey, Mr. Sakya has been a strong advocate for capacity building and knowledge sharing among Nepalese experts. He firmly believes that Nepal possesses a wealth of technical resources through its diaspora across the globe, which can be leveraged for the country's development aspirations.



Source: Nepal Press

of

Under his leadership, the NEA Engineering Company was formed in 2017 as a Consulting company providing engineering design and services to Nepal's Electricity Generation, Transmission, and Distribution sectors. The company's portfolio includes pioneering electric vehicles in Nepal, executing large-scale hydro projects with high dams and impressive MW capacities, and undertaking numerous transmission line projects. Moreover, they actively contribute to Nepal's sustainable development by conducting Environmental Impact Assessments for hydro projects.

Mr. Hitendra Dev Sakya's dedication to the advancement of Nepal's engineering sector, particularly in hydropower, has positioned him as a key figure in the nation's quest for sustainable energy solutions and capacity building. His expertise, enthusiasm, and commitment continue to drive progress in Nepal's energy landscape, benefiting both the country and its talented workforce

Ms. LILA DEVI GADTAULA

Lila Devi Gadtaula holds a prominent position in Nepal as the Secretary of the Nepal Law Commission. While little information about her personal life is publicly available, her professional achievements highlight her expertise in legal matters and her contributions to the advancement of Nepal's legal system. Following the completion of her law degree, Gadtaula embarked on her career in the legal sector and through dedication and knowledge, she significantly impacted the legal community. Her extensive experience has granted her a profound understanding of Nepal's intricate legal framework.

As the Secretary of the Nepal Law Commission, Gadtaula plays a crucial role in shaping and refining the nation's legal policies. This constitutional body is entrusted with the drafting, amending, and reforming of laws to ensure their relevance and effectiveness in Nepal's fast-changing social and economic landscape. In her capacity as an accomplished legal expert, Gadtaula supervises the research, drafting, and analysis of proposed legal reforms, while also leading and coordinating the commission's activities. It is her responsibility to ensure that the commission's proposed laws align with constitutional principles, address contemporary social issues, and adhere to international best practices.

Under Gadtaula's guidance, the Nepal Law Commission actively engages in legal reforms and initiatives aimed at enhancing access to justice, safeguarding human rights, and fostering a just society. Her contributions are instrumental in strengthening the rule of law and ensuring that the legal system caters to the needs and concerns of the Nepali population. Through her dedication and commitment to serving the legal needs of her nation, Gadtaula has earned respect and influence within Nepal's legal community. Her work continues to drive the ongoing development and advancement of Nepal's legal system.



Source: Ratopati

Mr. ABID HUSSAIN

Mr. Abid Hussain is currently leading an action area at ICIMOD with the aim of fostering policy and institutional changes to facilitate smooth transitions towards sustainable, low-carbon, and circular economic models. The focus of this initiative revolves around several key aspects, such as improving regulatory frameworks, promoting high-value niche products from mountain regions, integrating various livelihood activities like agriculture, yak pastoralism, and tourism with emerging income sources. Additionally, the initiative seeks to empower youth and women by equipping them with digital technology skills, exposing them to new markets, and integrating them into the workforce to tap into emerging opportunities.

Mr. Hussain is also a researcher and policy expert who focuses on various aspects of mountain agriculture, food and nutrition security, agrobiodiversity, and climate change adaptation. He also supervises a group within the Livelihoods Theme, providing them technical guidance on sampling designs,

quantitative research methods, and econometric analysis related to social and economic aspects of livelihoods. His work aims to address challenges faced by mountain communities and promote sustainable development in these regions.

His efforts are dedicated to protecting the pulse of the planet by focusing on the socioeconomic dimension of development in mountain regions. His research work aims to gain a deeper understanding of the multidimensionality and complexity of mountain food and nutrition security. His research also explores the diversity and resilience of agricultural systems in these regions, especially concerning their ability to cope with climatic, socioeconomic, and other risks.

Additionally, his work extends to studying non-agricultural income opportunities that can contribute to strengthening food security in mountain communities. The research outputs from his work play a vital role in informing policies, strategies, and programs related to sustainable development and food security in mountainous areas.

Mr. Abid Hussain's extensive qualifications, expertise, and passion for sustainable development make him an invaluable asset in the pursuit of protecting the pulse of the planet and fostering resilient mountain economies. His commitment to improving the livelihoods and well-being of mountain communities serves as an inspiration for others working towards similar goals in the development sector.



Source: Mountain Research and Development

OUR PANELISTS

Dr. Dipak Gyawali

Dipak Gyawali is a hydroelectric power engineer (Moscow Energy Institute) and a political economist (Energy and Resources Group, University of California at Berkeley). A former minister of Water Resources in Nepal 2002/03, who initiated reforms in the electricity and irrigation sections focused on the decentralization and promotion of rural participation in governance also initiating the first national review and comparison of Nepali laws with the guidelines of the World Commission on Dams.

Mr. Gyawali has been a visiting professor at the UN University in Japan and is Academician of the Nepal Academy of Science and Technology as well as chairman of Nepal Water Conservation foundation. He has also been a research scholar at the East-West Center in Hawaii, the Queen Elizabeth House in Oxford, the London School of Economics and the International Environment Academy in Switzerland. He conducts interdisciplinary research which focuses on the interference between the technology and the society, primarily on water, energy, natural resources as well as ethics and philosophy, basically from the perspectives of cultural theory of plural rationalities.



Source: APN

Mr. Gyawali is currently serving on the advisory committee of the Nepali associations such as Biogas Support Program and to international organizations such as UN World Water Assessment Program, STEPs Center/IDS Sussex, as well as US Pacific National Northwest Lab's multi-country study Human Choice and Climate Change. He has also served on several government commissions related to Himalayan water and energy resources development. He has served as a member of the panel of experts for the Mekong River Commission reviewing its basin development plan and has also published extensively both academically and in the popular press on water resource, environment and development issues. In addition, he is a guest senior research scholar with the International Institute for Applied Systems Analysis (IIASA) in Luxemburg, Austria, and a member of the Global Forest Expert Panel on Forests and Water set up by the International Union of Forest Research Organizations (IUFRO).

Mr. DINESH KUMAR GHIMIRE

Dinesh Kumar Ghimire is the Secretary of the Ministry of Energy, Water Resources and Irrigation, Government of Nepal since December 2018. He has been associated with the power sector of Nepal for more than two and half decades. Currently, he is the chairperson of three renowned companies namely Vidyut Utpadan company, Limited (VUCL), Rashtriya Prasharan Grid Company Limited (RPGCL), and the Hydroelectricity Investment and Development Company Limited (HIDCL) all under the Ministry of Energy Water Resources and Irrigation. He is also on the Board of Directors of Nepal Electricity Authority. He has been associated with the power sector of Nepal for more than three decades.

During his service in various government organizations, he was involved in planning, budgeting, monitoring, and evaluation of power projects, Project Development Agreement negotiation, private sector promotion, promoting renewable energy projects, etc. Mr. Ghimire has led many bilateral negotiations and mechanism meetings regarding water and power issues with neighboring countries like India, China, and Bangladesh.



Source: The Annapurna Express

He also served as a Governing Board Member from Nepal in SAARC Energy Center and has been engaged in Regional and Sub-regional forum like South Asia Subregional Economic Cooperation (SASEC), South Asian Association for Regional Cooperation (SAARC), Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and BBIN which is an agreement between four countries i.e. Bangladesh, Bhutan, India and Nepal that devises and implements ideas related to resource management, transportation, etc. Apart from him full time service in the Government, Mr. Ghimire has teaching experience in various engineering college such as Institute of Engineering, Pulchowk, Kathmandu Engineering College, Advanced College of Engineering and Management, Kantipur City College, and Khwopa College of Engineering both at Masters and Bachelor levels.

Mr. Ghimire has received his M. Tech. in Hydro Electric System in Engineering and Management from Indian Institute of Technology Roorkee, India, and his undergraduate degree in Electrical Engineering from Rajasthan University, Jaipur India.

Ms. SUBHA LAXMI SHRESTHA

Mrs. Shubha Laxmi Shrestha is an accomplished and dedicated professional with a rich background in the energy sector. Her expertise in renewable energy and energy efficiency has made her a valuable asset to the Alternative Energy Promotion Center in Nepal, where she currently serves as Assistant Director. The organization, operating under the Ministry of Energy, Water Resources, and Irrigation, plays a vital role in promoting sustainable energy practices throughout the nation.

Over her 18-year career, Ms. Shrestha has contributed significantly to the development and implementation of energy policies, strategic planning, and initiatives aimed at enhancing energy efficiency. Her work also involves formulating guidelines, establishing standards and labeling, capacity-building activities, as well as monitoring and evaluating energy-related projects. Collaboration with various stakeholders and external development partners is also an essential aspect of her role, ensuring a cohesive and coordinated effort towards sustainable energy practices in Nepal.



Source: AEPC

Mrs. Shrestha's Mechanical Engineering degree laid a strong foundation for her career in the energy sector. She completed Master of Engineering in Energy from the prestigious Asian Institute of Technology (AIT) in Bangkok, Thailand. Her outstanding academic performance earned her three awards of excellence and the prestigious Nepal Education Gold Medal, personally awarded by the President of Nepal. Her dedication to continuous learning and development is evident in her current pursuit of a part-time Ph.D. program at Kathmandu University, further solidifying her knowledge and expertise in the field. Driven by her unwavering dedication for promoting sustainable energy practices, deep understanding of cutting-edge technologies and a strong focus on sustainability, Ms. Shrestha continues to drive positive change in the field of renewable energy. Her commitment to a sustainable future for Nepal is evident in her remarkable achievements and ongoing efforts.

Mr. KUSHAL GURUNG

Kushal Gurung, the CEO of Wind Power Nepal Pvt. Ltd., had a vision of generating 100 megawatts of renewable energy in Nepal within a decade. He left a successful career in Scotland to return to Nepal in late 2011 when the country was facing severe power cuts. Witnessing this issue motivated him to contribute to the field of renewable energy, and he chose wind power due to his previous experience in the sector. In 2012, after a year of research and market study, Kushal established Wind Power Nepal (WPN0). Although the amount helped kickstart the project, it was insufficient for the company's long-term growth. Initially, wind energy was not well-regarded by many, and WPN faced challenges being a newcomer in the industry.

To sustain the business, Kushal decided to provide offshore consultancy services to a wind research company based in Europe, leveraging his previous work experience. This consultancy venture brought in enough revenue to support WPN's new project, Bio Urja 100. However, the rooftop wind turbine project faced stiff competition from solar energy, and the high post-sales maintenance costs and logistical challenges forced them to abandon it within six months.

Over the next four years, WPN faced difficulties due to the lack of supportive policies for wind power in Nepal. They engaged in extensive lobbying efforts, publishing numerous articles in daily newspapers, and collaborating with major energy departments and donors, such as the Alternative Energy Promotion Center (AEPC), Ministry of Energy, and Department of Electricity Development. These efforts gradually gained them recognition in the market by 2013.

A turning point for WPN came in 2015 when they won the tender for executing the World Bank's 'Nepal Wind Mapping Project (2015-2018),' which Kushal considers their most significant achievement to date. Running a business has its highs and lows, and Kushal acknowledges the frustration of managing income and expenditure. To mitigate such challenges, he adopts a strategy of keeping the company's assets as light as possible, producing only when there are confirmed orders.



Source: LinkedIn

Dr. ASHMA VAIDYA

Ashma Vaidya is an accomplished and passionate professional with expertise in renewable energy and natural resource management. With over five years of experience in the renewable energy sector, she has established herself as a respected independent consultant and educator.

Her journey in the field began with a solid educational background. Ashma holds a Doctorate degree in Environmental and Energy Policy from Michigan Technological University, where she gained valuable insights into the intricacies of sustainable development and environmental management. Prior to that, she completed her Master's degree in Earth and Environmental Science from Lehigh University, which laid the foundation for her comprehensive understanding of natural resource management.

Throughout her career, Ashma has been deeply involved in various renewable energy-related educational, training, and advocacy projects. Her commitment to fostering sustainable practices and promoting renewable energy solutions has made her a driving force in the industry. As an educator, she has contributed significantly to raising awareness about the importance of renewable energy and its potential for a greener future.

Ashma's expertise extends to Community-Based Participatory Research, a methodology that involves active collaboration with communities to address environmental and energy-related challenges. This approach reflects her dedication to empowering local communities and ensuring that renewable energy initiatives benefit everyone involved.

With a diverse skill set that encompasses renewable energy, natural resource management, and environmental policy, Ashma continues to make a positive impact in her field. Her dedication, knowledge, and passion for sustainability have earned her recognition and admiration from peers and colleagues alike, solidifying her place as a leading figure in the renewable energy sector.



Source: AECF

SYMPOSIUM VENUE

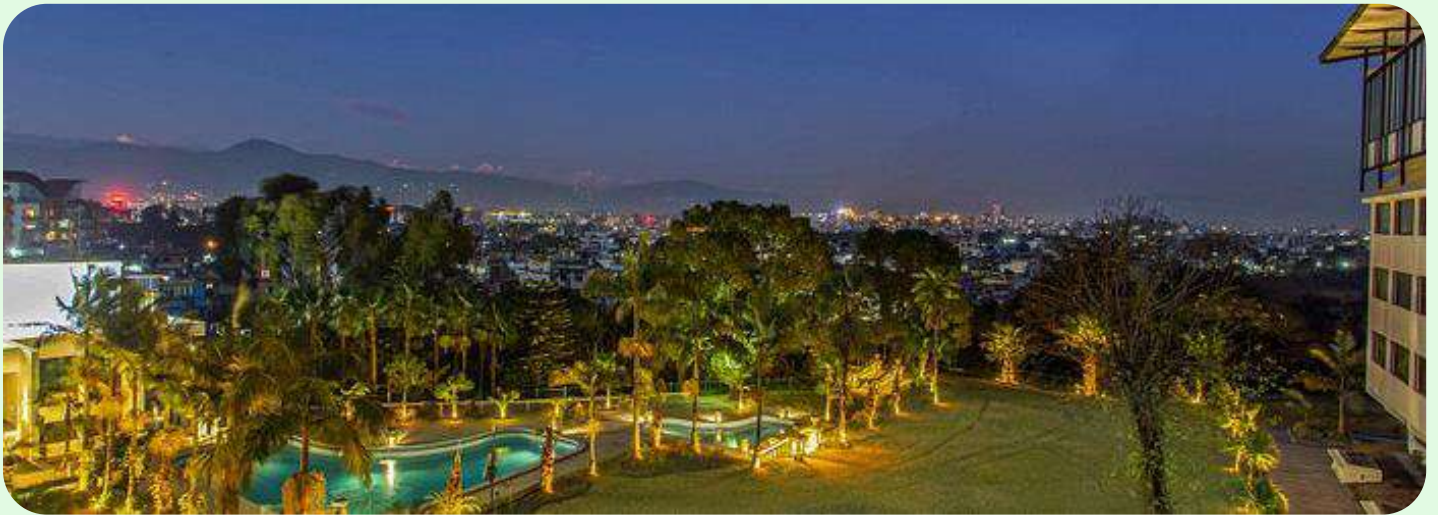
KATHMANDU

Kathmandu is the administrative capital and largest city of Nepal, with a population of around 1.5 million the city hosts a multitude of vibrant festivals throughout the year, showcasing the deep-rooted traditions and religious practices of the Nepalese people. It provides its visitors with an immersive experience of the cultural variety of Nepal. Kathmandu is and has been for many years the center of Nepal's history,

location gives it a great starting point for exploring the Himalayan area, whether going on treks, climbing peaks, or just taking in the peaceful stillness of the highlands.

HOTEL HIMALAYA

Hotel Himalaya is a renowned hotel in the heart of Kathmandu, Nepal, offering a blend of traditional Nepali hospitality and modern amenities. With its convenient location, comfortable rooms,



art, culture, and economy. The city is considered the gateway to the Nepalese Himalayas and is home to several world heritage sites; the Durbar Square, Swayambhunath, Boudhanath and Pashupatinath. The city's strategic

delightful dining options, and state-of-the-art facilities, it caters to both business and leisure travelers. The hotel's warm and friendly staff ensure personalized service, making it a preferred choice for visitors from around the world.

IMPORTANT DATES

Registration Opens

-July 19th 2023

Registration Closes

-July 28th 2023

Symposium Day

-July 30th 2023

REGISTRATION FEES

CATEGORY	AMOUNT
Student	NRs. 1000
Non-Student	NRs.4000



Scan Here!

PROGRAM SCHEDULE

Timings*	Activity*
09:00 – 9:30 AM	Guest Arrival / Tea and Cookies
09:30 – 9:35AM	Welcome Remarks: Mr. Brijesh Adhikary - Symposium Co-Chair
09:35 - 09:40AM	Special Remarks: Mr. Shakti Bahadur Basnet - the Chief Guest (Hon 'able Minister, Ministry of Energy, Water Resources, and Irrigation)
09:40 – 09: 45 AM	Special Remarks: Dina Upadhyay – Special Guest (Former state Minister)
09:45 – 09: 50 AM	Special Remarks: Mr. Jan Erik Studsrød – Special Guest Energy and Climate Counsellor, Royal Norwegian Embassy in Kathmandu)
09:50 – 10: 00 AM	Presentation About EnergizeNepal and GridVille
10:00 – 10: 15 AM	Keynote Speech: Mr. Abid Hussain, Interim Area Coordinator, ICIMOD Topic: <i>Renewable Energy in Nepal – Key Findings and Recommended Policy Actions</i>
10:15 – 10:30 AM	Keynote Speech: Mr. Hitendra Dev Shakya, Former Managing Director NEA Topic: <i>Sustainable Distributed Generation and Grid Access to All-SUDIGGA revisited</i>
10:30 – 10: 45 PM	Keynote Speech Ms. Lila Devi Gadtaula, Secretary, Nepal Law Commission Topic: विद् युतसँग सम्बन्धित कानूनी र संस्थागत विस्था
10: 45 – 11: 00 AM	Q&A
11:00 – 11:30 AM	Poster Presentation
11: 30 – 12:45PM	Lunch Break
12: 45 – 14: 00 PM	Panel Discussion, Topic: <i>Energy Policies and Infrastructure Development Enabling the Renewable Energy Transition for a Sustainable Future.</i>
14:00 – 14:10 PM	Souvenir Distribution
14: 10 – 14: 20 PM	Closing Remarks by Conference Co-Chair Prof. Dr. Rishikesh Wagle

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