

YOUTH INPUTS AND RECOMMENDATIONS FOR DRAFT REPORT 9 APRIL 2021

TECHNICAL WORKING GROUP #4 INNOVATION, TECHNOLOGY, AND DATA

2. CONTEXT

2.3. Social Innovations

There are almost three billion young people around the world, which makes them a critical stakeholder in achieving SDG 7 by 2030. Young people are primed to be agents of change for the energy transition, bringing new integrated solutions and pursuing careers aimed at decarbonizing the sector.

Youth believe that achieving SDG7 by 2030 is an urgent task and that progress on the transition of the energy and related sectors have not been satisfactory in their regions. There is a need for stakeholders to work together and build coalitions with young people who can contribute to the solutions needed to accelerate the transition. The transition is viewed by youth as not only an effort to reduce the GHG emissions but to also address other social development issues that will ensure a resilient future. As young people are beginning to enter the workforce, they are not attached to specific technological solutions, methods, or conventional sectoral thinking. This makes young people more receptive to a transition to new and transformative technologies, innovation, and changes to business-as-usual. The opportunity of technological and financial innovation is perceived as an opportunity for young people to contribute their ideas and efforts.

Achieving SDG7 at scale depends on a well-equipped labour force motivated to move into clean energy opportunities across the value chain - projected to be close to the 12.5 million jobs in renewable energy alone. There is a distinct need to support the employment and digital skill building that enable a labour force to move into leadership and management roles as well as the technician roles that are more frequently referenced in the just transition conversation.

Why it is critical to prioritize a youth-inclusive and youth-centric roadmap for achieving SDG7:

- Youth make up a significant public advocacy body pushing for clean energy and access policies from their local and national governments.
- Youth bring unique local social innovation skills, community perspectives, and systems-level solutions that will enable countries to achieve co-benefits and an equitable transition.
- Young people are one of the most vulnerable groups to a lack of clean, affordable, and reliable energy access and the highest numbers of youth populations align closely with regions with the greatest energy needs.
- There are statistically significant data correlations between issues like access to education and access to energy, so this is a cross-cutting issue that the economy and young people are impacted by but uniquely suited to work on.

In conclusion young people are our key to sustaining and building momentum on achieving universal clean energy access through to 2030 and beyond.

3. CHALLENGES

3.1. Achieving the 2030 targets: challenges in broadening technology adoption.

To achieve universal adoption, governments and companies need to work in partnership with local and diverse communities to co-design the pathways for including these voices in the roadmap to technology adoption.

Young people offer an opportunity to work in partnership with community members who recognize the opportunities of these technologies and are trusted by locals – companies and national governments will not be successful in large scale dissemination of clean energy technology without gaining the trust of locals before asking them to integrate clean energy technology into their lives. Young people and community partners can also play a role in building a willingness to pay (WtP) from end-users.

Opportunities to work in partnership with governments and companies – particularly opportunities for youth as stewards of adoption in their communities – must be (1) meaningful, mutually valuable and compensated, (2) actively inclusive and accessible to young people and community members who represent communities historically left out of these processes, (3) accountable with tangible follow-through mechanisms so those stewarding adoption feel valued and that they are contributing to real impact.

To address a real fear by communities resistant to adoption, governments and companies must make serious efforts to ensure that as technology is adopted locals do not lose their jobs and livelihoods. Communities want to see their people and values reflected in roadmaps for technology adoption, as many regions of the world are trying to protect and conserve their culture in decision-making in innovation, technology development, entrepreneurship, and education.

3.2. Technology and innovation for achieving net-zero by 2050: challenges with technology development and demonstration.

Young people have noted a lack of transparency between energy industry and government in setting robust environmental standards that will contribute to reaching net-zero. It is up to governments to ensure cohesion and unanimity across the energy industry value chain in their plan to decarbonize. This approach is key not just throughout the design of appropriate policies but also in their execution.

Young people want to pursue meaningful careers that have a positive impact on our climate and social wellbeing, but many are not aware of where they can access opportunities in the clean energy sector. The changing energy sector will need to adapt to years of successful youth recruitment strategies by the fossil fuel industry. It is important to explore how the rapidly growing clean energy sector provides more meaningful support throughout young people's career trajectory, particularly youth from vulnerable and underrepresented communities in the sector (women, rural and remotely based youth, youth without formal education).

Governments need to consider and prioritize support for current workers to transition out of the fossil fuel industry, and young people in regions where there is a lack of opportunity for other careers. Young people are facing employment challenges in all sectors right now, so governments and the

clean energy sector needs to understand and adapt to why young people choose careers in the fossil fuel industry in order to grow demand for jobs in the clean energy sector:

- It may be the only viable job option in their region.
- They may face mounting costs of living or debt.
- It may be one of the few industries in their region that provides adequate educational and professional training or support.

4. RECOMMENDATIONS

Support for research, development, and demonstration (RD&D) and Innovation

- Youth entering clean energy careers, starting businesses as entrepreneurs, and pursuing integrated solutions as social entrepreneurs are critical enablers of achieving SDG 7 by 2030.
- Invest more in business incubation platforms and offer a more inclusive range of financial support for young people accessing these programs. This will support young entrepreneurs and intrapreneurs working on integrated solutions and new technologies while also ensuring that they become viable at industry scale. Examples of these platforms include national-level incubator programs which focus on strengthening the entrepreneurial capacity of early-stage green ventures led by youth. Youth Innovation Hubs could be established, where young entrepreneurs and intrapreneurs can actively explore new technologies that address complex decarbonization challenges, by collaborating with each other and with organizations. Providing such platforms will further encourage the mobilization of expertise and familiarization of the industry landscape on a national level, and thus support the scalability of new innovations.
- Support youth directly with funding: Organizations with long histories and (relatively) large budgets need to recognize the uphill battle many young people are facing to be able to participate in the energy transition. Young people who do not come from privileged backgrounds are entering adulthood facing multiple levels of economic and social uncertainty, while also working on important climate action. Organizations need to work on direct-to-youth funding models to support youth leadership of all kinds, at all stages, including direct funding for youth-led community organizing, youth-led social enterprises with a strong commitment to climate justice, and other collaborative work.
- Young people are demotivated to pursue RD&D in clean energy and cleantech due to the well-understood institutional and regulatory barriers to implementing technology and innovative approaches to applying technology. Governments must commit to rethinking regulatory frameworks that limit the ability of the energy system to adapt and evolve.
- Explore youth-inclusive blended finance: A tri-lateral relationship between young entrepreneurs from both rural and urban areas, government and/or private companies and/or philanthropy and development funding could commit to designing a financing framework for youth to be supported at the early and middle-stages of RD&D. Young entrepreneurs who have potential ideas could get funded from private companies as venture capitalism from where companies could get an incentive to participate in the mechanism. Governments, philanthropy and/or development agencies could enable this framework through infrastructural support, promotion, and subsidies for participating companies.

Strengthen Global Cooperation and knowledge sharing to accelerate the technology diffusion

- Commit to creating pathways for young people to directly engage in policy processes, decision-making and research and development on industry decarbonization solutions.
- Support youth movements to gain traction and credibility with their influence on decision-making. Governments have a responsibility to consult directly with youth through programs like advisory boards and roundtables and make an active effort to compensate youth for their time contributions and proactively invite representation from youth to participate.

Design demand creation market-oriented policies

- Enable a healthy investment ecosystem for low-carbon and renewable technologies. Shifting to low or zero-carbon energy sources and carriers, new industrial processes, CCUS, and energy efficiency technologies have high upfront capital costs and financing mechanisms must be made available in order for industries to make a business case to their financial teams, board of directors and shareholders, where they may not see economic returns for several years. This can be done through fiscal policy tools such as taxes, charges, subsidies, incentives, and budget allocations, whilst also ensuring that they are designed to address inequalities and not adversely affect vulnerable communities.
- In countries with dominant state-owned energy companies, governments need to explore how markets can reduce risk so that smaller companies can compete with state owned entities.

Address the awareness gaps at various levels

- Education, spreading awareness, and informing the public on the scale of emissions from both production and consumption of industrial products are crucial to changing behaviour in how people choose to spend their money and engage their communities, how they vote for political platforms, and how they advocate within industries for change as employees.
- Governments must be transparent and hold themselves accountable to the public on how they are reinvesting environmental tax returns and other financial mechanisms into integrated solutions that support decarbonization, social welfare, and economic activity.
- In the education sector, it is imperative that evidence-based climate science and the level of urgency required for action is communicated to students seeking careers in the energy sector to foster critical thinking and decision-making for future career choices.

Capacities and skills, in particular for young professionals

- Ensure youth have access to education and training that enables them to think critically and develop relevant capabilities and apply their motivation and knowledge to practical solutions. If young people are not supported to be competitive in a changing future of work, many sectors will continue to struggle to find and employ talent that can sustain this transition in the energy industry. The talent and knowledge gap presents a significant risk to achieving universal clean energy access by 2030.

- Governments and companies must commit to mainstreaming training on (1) diversity, equity, and inclusion; (2) sustainability and climate justice; (3) digital skills; and (4) “soft” skills like communications and collaboration at every employee level and in formal education systems.
- Local and/or subnational governments must take a multi-stakeholder approach to setting metrics of success for the effective delivery of this training. Companies and academic institutions must ensure transparency with their employees, students, and communities on how this training is being integrated into operations, curricula, and teacher training to ensure accountability and mitigate perceived “SDG-washing”.
- Commit to providing free, globally accessible energy education resources, skill development and capacity building programs, and fostering a global community of youth who are all committed to advocating for a sustainable energy transition in every sector.
- As an added layer to capacity-building and opportunities for young people and other underrepresented communities, governments, companies, and organizations must design solutions with a lens to mitigate against inequities between urban centres and outside of urban centres; inequities in access to finance and technology; and create incentives for companies to bring young people into their organizations.

Sources of Input, Research and References

- [The High-level Dialogue on Energy: Youth Perspectives Consultation with UNDP](#)
- [Global Youth Energy Outlook](#) (Student Energy, DNV GL, LeadIT, Government of Denmark, Government of Canada)
- [Youth Perspectives on the Industry Transition](#) (Leadership Group for the Industry Transition, Stockholm Environment Institute, Student Energy)
- [Indo-Pacific Youth Dialogue](#) (United States, Young Southeast Asian Leaders Initiative, Cultural Vistas)

ADDITIONAL INPUT FROM UNDP YOUTH CONSULTATION PROCESS
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Inclusive innovation, human-centric design and public participation

- Incorporate innovation in the solution design stage with channels for people to participate and engage in policymaking, technology design and social innovation.
- Motivate consumer behaviour change by prioritizing human-centred design.
- Social innovation and new technologies that impact consumer interactions with energy can result in co-benefits of a more engaged public on emissions-reduction and public support for a sustainable and equitable energy system

Investment and financial mechanisms

- Prioritize capital investment in localization of manufacturing and production processes to support local economies, improve circularity and a robust local after-sales infrastructure to support the upkeep, repair, replacement, and recycling of products.
- Support local investment and low-tech solutions.
- Financial inclusion and accessibility of financing solutions to support the adoption of energy efficient technologies.
- Policies that incentivize investment in and development of renewable energy infrastructure, such as carbon pricing mechanisms.
- In countries where low carbon technology and innovation exists, policy and regulation should prioritize and enable least cost technologies that can be sustained in the long-term.
- Prioritize investments in renewable energy storage technologies for the heavy industry and other hard-to-abate sectors.

Energy education, training, and capacity-building mechanisms

- Power shortages in communities, particularly in low-income countries and regions make compound the challenges youth face in gaining the energy education and training needed to pursue careers and develop solutions.
- Promote partnerships between academia, research institutions, non-profit organizations, and funding agencies to support capacity-building for youth-led innovation.
- Enable the growth and expansion of university and college clean energy exchange programs.
- Promote competitions and programs that support youth creativity and innovation, with mechanisms for youth-inclusive funding.
- Skills development in development electric and hydrogen fuel cells

Other data, technology and innovation priorities

- Promote innovation in architecture, green built environments, and energy efficiency technology.
- New technologies, better efficiency and cost-savings can result in consumer behaviour that supports high carbon-emitting sectors. Investment in technology, energy efficiency and affordable clean energy must be paired with a transition to a circular economy with accountability mechanisms for governments and the private sector to commit to circular policies and practices.
- Regulation, outdated procurement, and barriers to accessing financing for innovative projects continues to stifle productivity in the energy innovation and technology sector.

- Reliable, trusted, current data and energy modelling that outline transitions to low-carbon, inclusive energy systems and co-benefits such as job growth are critical to building political support for achieving SDG 7.