

# CAREC INSTITUTE RESEARCH CONFERENCE

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## Session Four

Industries and Enterprises for Restart and Recovery

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# *Converging Environmental Necessities and Energy Requirements: Producing Renewable Energy and Hydrogen for Economic Revitalization and Growth in the Post-COVID-19 Pandemic*

**Dr. Hooman Peimani**

*COVID19 and Potential for Economic Recovery in CAREC Region*

**Session Four: Industries and Enterprises for Restart and Recovery**

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# **I-Economic Impact of the COVID-19 Pandemic**

**A-The COVID-19 pandemic has damaged the global economy by pushing it into a period of contraction and recession after a decade of poor performance.**

**B-In particular, it has negatively affected Asia, which is the world's largest economy and energy consumer.**

**C-The CAREC region has not been spared by the pandemic.**

**D-To a varying extent, the regional countries' economies have all experienced slowdowns, recessions and/or contractions, as a result of their lockdowns and imposed restrictions on economic and social activities as well as those of their trading partners.**

## **II- The COVID-19 Pandemic and the Necessity of Energy Shift in the CAREC Region**

**A-The pandemic has signified the danger of the worsening global warming and climate change and the urgency of shifting from the current carbon-intensive economy to a low-carbon and eventually, zero-carbon one.**

**B-The mentioned shift in the CAREC region demands replacing oil, gas and coal as the main source of energy with sustainable alternatives.**

**C-Hence, it is necessary to develop the regional production capacities to supply the region with green energy, i.e., renewable, nuclear and potentially hydrogen.**

# III-Green Energy as an Economic Boaster in the CAREC Region

A-Developing the region's renewable energy and nuclear sectors is not only a necessity for reducing its greenhouse gas (GHG) emissions, but also an available means for revitalizing its economy

B-Efforts to develop the CAREC region's production of environmentally clean renewable energy (E.g., wind, solar and small hydro) can certainly boost the regional economy damaged heavily by the pandemic.

C-Such efforts, if wisely made, will involve a wide range of industries from mining to manufacturing for the required raw material and parts for the mentioned power generators and also for the electricity-based emerging industries such as electric vehicle producers.

D-Added to their existing large manufacturing units, the availability of such necessities in large-scale could also provide the possibility for setting up small-scale and, thus, low capital-intensive manufacturing units for the aforementioned generators and vehicles all over the CAREC region.



# **IV-Hydrogen as a Potential Green Energy Option for the CAREC Region**

**A-Producing hydrogen for fuel cells, not through methane steaming (“grey” or “blue” hydrogen), but from electrolyzing of water with green electricity (“green” hydrogen) could be another feasible and necessary project for expanding the regional countries’ range of alternatives to fossil energy.**

**B-To avoid depletion of water resources, decrease the required energy and reduce the cost, wastewater should be used for electrolyzing after removing its solid waste, which could also be used as fuel or recycled.**

**C-Green hydrogen could be especially, but not exclusively, used for public transportation (e.g., city buses) and land transportation of goods (e.g., trucks) to help the CAREC region decrease its GHG emissions substantially, while satisfying its essential needs.**

# V-Conclusion

A-As feasible and plausible projects, developing and expanding the CAREC region's renewable and nuclear energy sectors and hydrogen production capacity and their respective bus/truck engines and electric vehicles could not only help the region stop and eventually reverse global warming as an environmental and economic imperative, but also help revitalize and potentially expand its economy after a period of the pandemic-imposed contraction.

B-As well, these projects could potentially help the CAREC region establish itself as a leading global supplier of renewable, nuclear and hydrogen technologies with its obvious economic benefits.



Thank you for paying  
attention!