

The Effect of Global Warming on Water Resources

Authors : Ehsan Soltanzadeh, Hassan Zare

Abstract : This paper introduces examples of the influences of global warming on water resources and means of adaptation. The contributing causes of shortage in water resources are sophisticated and have interactions with each other. The world-scale phenomena like global warming have led to an increase in air and ocean's mean temperature, and this has already caused adverse effects on water resources. Other factors that exacerbated this situation such as population increase, changes in farming habits, rise in city dwellers, unbalanced request for energy and aquatic resources, improved living standards, new eating habits, increasing economic growth and consequently flourishing industrial activities, and different types of pollution such as air, water, etc., are compelling more pressure on our limited water resources. The report will briefly discuss climate change and its detrimental impacts on the water resources and finally will introduce two effective solutions to mitigate the consequences or even reverse them in the near to mid-term future: utilization of molten salt technology for storing huge amounts of generated electricity in solar power plants to accommodate power grid demands, and implementing fuel cell CHPs to reduce carbon emission, and consequently, mitigate the global warming phenomenon as the major root cause of threatening water resources.

Keywords : climate change, global warming, water resources, GHG emissions, fuel cell-CHP, solar power plant, molten salt storage

Conference Title : ICESSEM 2023 : International Conference on Energy Storage and Sustainable Energy Management

Conference Location : Montreal, Canada

Conference Dates : May 15-16, 2023