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CLEAN ENERGY PIONEER

Regen Power CEO Emeritus Professor Chem Nayar dies at 75. He has succumbed to myeloma and left for his heavenly abode.

Multi-award winning Professor Nayar's outstanding contribution to the Australian and global clean energy industry cannot be overstated.

Since his Australian-first 1982 PhD thesis on wind power, Professor Nayar's subsequent pioneering research and innovative projects have substantially advanced solar and wind systems as economically viable, sustainable energy sources.

Highlights of Professor Nayar's work:

- Design and delivery of renewable energy systems to remote areas and communities, which immeasurably improved living conditions, increased connectivity and developed self-sufficiency.
- Founder of the Centre for Renewable Energy and Sustainable Technologies Australia (CRESTA) in 1992. CRESTA's continued leadership in applied research and development of power conditioning and control systems solved unique challenges for remote supply systems and weak electricity grids as a founder member of the Australian Cooperative Research Centre for Renewable Energy.
- Professor Nayar received the Ambassador Award at the 2011 Sustainable Energy Association Awards, recognising his philosophy, attitude and actions that demonstrated his commitment and leadership in sustainable energy.
- First Fellow of Australian Solar Academy and first Australian Power Institute Lifetime Achievement Award winner.
- Securing more than $9 million in research funding for creative, practical renewable energy solutions specifically designed to support a wide range of communities and applications across Australia and overseas.
- Seven trademark and patent applications.

Early life

Professor Nayar was born as the second child in a lower middle-class family in Calicut, South India prior to Indian independence. He lost his mother when he was only three years old.

Securing first-class marks in 10th and 12th grade public exams, Professor Nayar was able to get admission into National Institute of Technology Calicut – a premier engineering institution under the Government of India.

Career

Professor Nayar graduated in 1969 with a first-class degree in electrical engineering. Unfortunately, India was going through economic recession at that time, but he was fortunate to get an associate lecturer position in his alma mater. Professor Nayar was also lucky to complete his masters by coursework and research at the Indian Institute of Technology Kanpur from 1974-76.

After completing the masters, Professor Nayar joined a National Institute of Technology as a lecturer in electrical engineering. In 1977, he invented a controller for cone winding machines used in spinning mills. The device was used to achieve anti-patterning by electronically controlling the on and off durations of the drum motors used in the cone winder.

Professor Nayar took an Indian patent for this invention and to commercialise this technology he set up a startup company called Digitron, which manufactured and supplied this product to several textile mills in India. The company was financed through a bank loan and, although the company had a unique product, Digitron went through financial difficulties.

Professor Nayar worked 12-14 hours during those days as a full-time lecturer and a part-time electrical engineer in the company. He was also involved in applied research in electrical engineering and managed to publish about six research papers in international journals.

Life in Australia

In 1981, Professor Nayar learnt about opportunities for higher studies in Australia. Due to his teaching and research background, Professor Nayar was successful in receiving scholarships from the University of Western Australia (UWA), the University of Adelaide and the University of Wollongong.

Professor Nayar found that UWA would provide him resources to conduct research on the topic of 'development of electrical generation system using wind energy'.

Moving to Australia in April 1982 with his wife and two children, it was the first time Professor Nayar had ever boarded an aircraft.

Borrowing money from the bank to meet their travel and initial expenses, the scholarship Professor Nayar received was just enough to cover the tuition fee, accommodation and living costs.

In 1984, Professor Nayar completed his PhD thesis on electrical power generation using wind power – the first PhD completed on wind power in Australia.

Managing to complete the PhD in just over two years, Professor Nayar went on to take a lecturing position at Singapore Polytechnic in August 1984.

In July 1986, he joined Curtin University – formerly Western Australian Institute of Technology – as a lecturer. Here, Professor Nayar secured a series of academic promotions to become a professor and the first personal chair in electrical and renewable energy engineering. He was able to consistently contribute to cutting-edge research and development in the field of renewable energy, and in 2011 Curtin University awarded Professor Nayar with the title of Emeritus Professor.

Professor Chem Nayar.

(L-R): Governor of Western Australia Kim Beazley, Professor Chem Nayar and Deputy Premier Roger Cook.

Professor Nayar's commitment to industry-focused solutions over pure academic research was a major differentiator. A natural leader, he inspired future sustainable power innovators by being a hands-on educator championing real-life engineering work. Professor Nayar supervised 40 PhD and masters students, each focused on exploring achievable benefits from the practical application of sustainable power.

Even after four decades of relentless contribution to the clean energy industry, Professor Chem Nayar had shown no signs of slowing down.

Giving back for the benefit of others is a trait Professor Nayar consistently demonstrated throughout his exceptional career.

For example, Professor Nayar has:

- Developed innovative design solutions that have contributed to economic stability, increased public awareness and supported the emerging tourism industries of many remote communities in Australia and around the globe.
- Engaged in 42 major national and international sustainable energy projects, including in Australia, Papua New Guinea, Malaysia, Maldives, India, Sri Lanka, Singapore, Philippines, Thailand, Solomon Islands and Vanuatu. Often, these projects were the first of its kind in their country.
- Established Curtin University as a world-renowned centre of excellence in the study of clean energy through his 38-year teaching and research career.
- Supervised 40 individuals working towards PhD and masters degrees, with almost all of his students continuing to make invaluable contributions to the industry through successful careers in sustainable energy.
- Published over 135 research papers and 80 journal articles.
- Delivered keynote addresses at more than 40 national and international industry conferences.
- Won many prestigious industry and national awards. Most recently being a finalist in the 2021 Australian of the Year Award.
- 2021 Western Australian of the Year Award finalist.

In 2003, Professor Nayar founded Regen Power, which is a national solar company providing renewable energy products and services to residential, commercial and off-grid mining and remote community markets, with a vision to create affordable access to power through sustainable solutions and innovative technologies.

Some of the major strengths of the company include undertaking research and development approved by AusIndustry, collaborative links with UWA, Curtin University and the University of Tasmania, as well as completing more than 30,000 residential and commercial installations in Australia.

Regen Power's contribution has been instrumental in commercialising renewable energy power systems to regular households at affordable prices. Key components of its success are its quality products and services, affordable pricing, ongoing innovation and its futuristic approach.

Ranked as the 55th-fastest growing company in Australia in the 2020 *Australian Financial Review* Fast 100 list, Regen Power has won various awards and nods for sustainable development and product development, vouching for its existence as a reputable brand in the solar power business of WA. Consecutively for two years, the *Financial Times* listed Regen Power among the top 500 Asia-Pacific high-growth companies, with the company ranked at 209 in 2020 and 326 in 2021.

A major achievement for the company took place in 2017-18 when it designed and commissioned the largest floating power plant in India. Another came the same year when Regen Power was appointed as owner's engineer for a US$50 million, 50-megawatt ground-mounted solar farm project in central Vietnam.

Regen Power was also a finalist in the Australian Technologies Competition in 2014 and a semi-finalist in 2019. Other accolades include the *Business News* Rising Stars People's Choice Award in 2019 and the 2020 *Business News* 40Under40 Awards awarded to Regen Power Managing Director Nikhil Jayaraj.

With a client base of more than 30,000, and exclusive agreements with major suppliers like Tesla, Regen Power is confident in capturing the future market.

Even after four decades of relentless contribution to the clean energy industry, Professor Nayar had shown no signs of slowing down, offering expert consultancy for several United Nations and government aid agencies. He was also on the advisory board of two Australian renewable solutions companies holding 20 per cent of the WA solar market.

REGEN Sustainable Power Solutions power