



WANGCHAN
VALLEY

EECI
EASTERN ECONOMIC CORRIDOR OF INNOVATION



"WANGCHAN VALLEY" SMART CITY

เมืองอัจฉริยะวังจันทร์วัลเลย์

Wangchan Valley Project is located in Wangchan District, Rayong Province, on a 3,454 Rai of land (approximately 553 Hectares). The project has been originated with the collaboration of PTT Public Company Limited together with National Science and Technology Development Agency (NSTDA), which is an affiliate of The Ministry of Higher Education, Science, Research and Innovation. The main purpose is to develop the city as one of the best Smart Cities that provides Innovation Ecosystem in Southeast Asia. Smart city concept has been applied to transform Thailand traditional industry towards National Strategy Thailand 4.0 (New S-Curve), as a matter of improving both economics and quality of life that are reinforced by innovation, knowledge, and technology.

AREA DEVELOPMENT



INCENTIVES & PRIVILEGES



Exemption of corporate income tax for up to 13 years



17% of personal income tax which is the lowest rate in Asia



Smart Visa for Professionals and Families



Exemption of import duty on machinery and raw materials



Regulatory Sandbox for Innovation



One Stop Service to facilitate investors



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TARGETED INDUSTRIES



Modern Agriculture &
Advanced Biotechnology,
Bio-Fuels & Bio-Chemical



High Performance
Battery & Modern
Transport



Automation, Robotics &
Smart Electronics

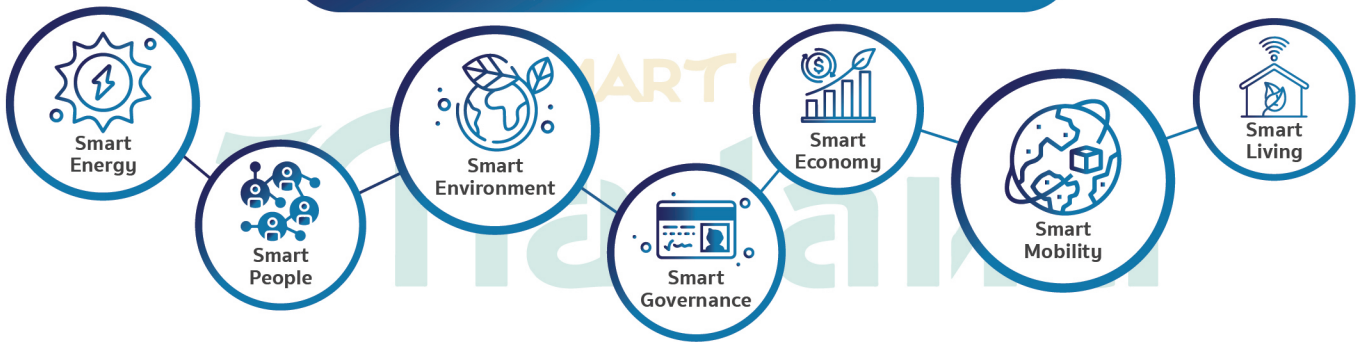


Aviation &
Aerospace



Medical Device

AWARDED 7 SMART CITY CERTIFICATES (SINCE AUGUST 2021)



FACILITIES & SERVICES



REGULATORY SANDBOX



UAV Regulatory Sandbox

- UAV Testing Field
- UAV Training Center
- UAV Maintenance / Repair Center
- UAV Traffic Management System
- Factory Acceptance Testing Field
- International Drone Competition



CAV Sandbox

- CAV Proving Ground by Department of Science Service (DSS)
- Wangchan Valley Private Track
- Wangchan Valley Semi Public Road
- Wangchan Valley 3D Digital MAP & RTK Device



NBTC Regulatory Sandbox

- Special Frequency for Innovation and Technology Testing
- Frequency Interference Monitoring



ERC Regulatory Sandbox

- Collaborated with PEA for Pilot Project : City-wide Energy Management towards Net-Zero
- Energy Trading Platform Demonstration



Website



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Brochure



www.wangchanvalley.com

UAV REGULATORY SANDBOX

Innovation that is restricted will struggle to evolve and progress into the future. The Wangchan Valley has been granted by the Civil Aviation Authority of Thailand (CAAT) as the only UAV Regulatory Sandbox Area in Thailand. **By allocating the entire 3,454-rai area of the Wangchan Valley** as a UAV Testing Field, it serves as a limitless experimental ground for cutting-edge technologies and innovations, which supports testing beyond standard drone flight regulations, such as:

NAVATNAPHA AIRFIELD



Beyond Visual Line of Sight (BVLOS)



Night Operation



Flying a drone higher than 90 meters above ground level



Testing various transportation methods.



An airfield measuring 830 meters in length and 18 meters in width



Capable of accommodating the takeoff and landing of small aircrafts and all types of UAVs.



Capable of accommodating a fixed-wing, multirotor, and drones weighing over 25 kilograms.



Capable of accommodating a wide range of spectrums of 4G, 5G, and WIFI Networks

Furthermore, Wangchan Valley is prepared to support testings to enable operators, researchers, and startups to fully utilize their newly developed technologies and innovations. This initiative is supported by the Civil Aviation Authority of Thailand (CAAT) and has received permission to use special frequency bands from the National Broadcasting and Telecommunications Commission (NBTC), aiming to collaboratively create future innovations at Wangchan Valley.



THAILAND'S 1ST
NORMAL FLIGHT CONDITION
120 METER-HIGH

UAV SANDBOX USE CASES



HG Robotics (HiveGround) conducted a successful trial of a Beyond Visual Line of Sight (BVLOS) drone delivery system in the Wangchan Valley. The drones, capable of transporting payloads up to 2 kilograms, utilized a 4G network to navigate pre-determined routes within a 3-kilometer radius.



Defence Technology Institute (DTI) Concludes Training and Awards Certificates for Tactical Unmanned Aerial Vehicle Operations for Search and Rescue, Cohort 1.



A team of instructors from the **Technopolis, Suranaree University of Technology (SUT)**, and the Defence Technology Institute (DTI) conducted a Drone Academy training program on "Basic Flight Safety and Visual Line of Sight Drone Piloting."



Aeronautical Radio of Thailand Ltd. (AEROTHAI) and the Defence Technology Institute (DTI) jointly organized the first batch of the Remote Pilot Specific Agriculture (RPSA) advanced Unmanned Aerial Vehicle (UAV) training course for agricultural applications.



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OFFICE SPACE AREA



Office Space

Size **144 Sq.m.**



Office Space

Size **320 Sq.m.**



TRAINING / MEETING / SEMINAR



Meeting Room

Size **60 seats**



Meeting Room

Size **10 seats**



Instructor Room

Size **8 seats**



Training Room

Size **40 seats**

Website



Facebook



Brochure



www.wangchanvalley.com

CAV SANDBOX

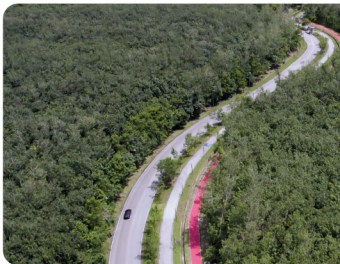
The relentless development of innovation testing in the Wangchan Valley project area.

Wangchan Valley focuses rigorously on developing both physical and digital infrastructures to support the testing of modern transportation, particularly **Connected and Autonomous Vehicles (CAVs)**. This effort has resulted in numerous collaborations between government regulators, educational institutions, and entrepreneurs. To facilitate innovation testings under the CAV Sandbox in Wangchan Valley, the entire area is equipped with both physical and digital infrastructures, supporting facilities, and essential resources that support various forms of testings such as,

- CAV Proving Ground by Department of Science Service (DSS)
- Wangchan Valley Private Track
- Wangchan Valley Semi Public Road
- Wangchan Valley 3D Digital MAP & RTK Device



ROAD AND TRAFFIC SYSTEM



EV Charger



Smart Pole



Smart Bus stop



CAV USE CASES



ปตท. จับมือ กรมวิทยาศาสตร์บริการ และภาคี (ประเทศไทย) ทดสอบยานยนต์อัตโนมัติไร้คนขับในพื้นที่วังจันทร์วัลเลย์



"วังจันทร์วัลเลย์" ได้รับมอบรางวัลจาก depa ในการประกวด Smart City Solution Awards 2024 ด้านขนส่งอัจฉริยะ (Smart Mobility) โดยไร้คนขับ



HG Robotics ทดสอบหุ่นยนต์ส่งของอัตโนมัติจากร้านค้าภายในพื้นที่วังจันทร์วัลเลย์

NBTC REGULATORY SANDBOX

The special frequency bands currently authorized include :

Applications for unmanned aerial vehicles (UAVs) include

- 410-480 MHZ
- 915-920 MHZ
- 925-928 MHZ



Applications for satellites include

- 430.0125 – 430.1375 MHZ
- 449.8625 – 449.9875 MHZ



Wangchan Valley is equipped with an extensive telecommunication infrastructures, covering the entire area with 4G, 5G, and Wi-Fi networks. It has also been designated as a special regulatory area (Regulatory Sandbox) by the National Broadcasting and Telecom-munications Commission (NBTC) to support research, development and testing that require the use of specialized frequency bands or 5G private networks.

RENEWABLE ENERGY FROM SOLAR POWER



DECARBONIZATION ACTIVITIES / PROJECTS



Microgrid at IOC Building
(PV Solar Roof Top with Battery Storage)



SOLAR PV Installation for EV Shuttle
Bus Stations and Guard Houses

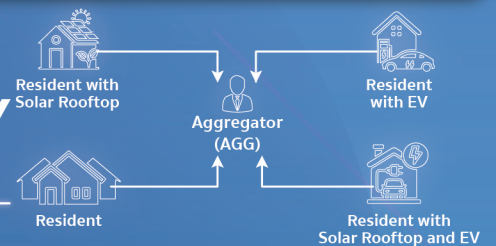


PV Solar Roof Top at Parking Lot for
EV Shuttle Bus

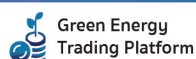
โครงการลดก๊าซเรือนกระจกภาคสมัครใจ ตามมาตรฐานของประเทศไทย (T-VER)



ERC REGULATORY SANDBOX



The "ERC Regulatory Sandbox" refers to a regulatory framework established by the Energy Regulatory Commission (ERC) to facilitate the research, development and testing of innovative energy solutions. This Regulatory sandbox involves collaboration between PTT and PEA to research, develop, and test a prototype of green energy trading platform, paving the way for future nationwide energy trading in Thailand.



ลำดับ	ชื่อโครงการ	ประเภทโครงการ
1	SOLAR PV Installation for EV Shuttle Bus Stations and Guard Houses) in EECI @Wangchan Valley	พลังงานทดแทน (AE)
2	Sustainable Forestation Project at Wangchan Valley by PTT	ป่าไม้และพื้นที่สีเขียว (FOR)
3	PV Solar Roof Top for Parking Lot Zone A1-4 in Wangchan Valley	พลังงานทดแทน (AE)
4	Wangchan Valley EV Transportation	การจัดการในภาคขนส่ง (TM)
5	Sustainable Forestation Project of Wangchan Forest Learning Center by PTTRFI and Ecosystem	ป่าไม้และพื้นที่สีเขียว (FOR)
6	Solar Photovoltaic System in Wangchan Valley by Global Power Synergy Public Company Limited	พลังงานทดแทน (AE)

Website



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