KPI	Performance
SDG 11 – Sustainable Cities and Communities	
การปฏิบัติที่เป็นความยั่งยืน (Sustainable practices)	Yes **<u>1. Transportation (TR)</u>** **<u>Shuttle services</u>** Suranaree University of Technology use electric bus in area campus. They are environmentally friendly. We have 10 bus they are start at 07.00 a.m.-09.30 p.m. 110 time/day. Can accommodate 50 passengers /bus. You can check route and schedule at http://web.sut.ac.th/dbg/indexcar.html **Zero Emission Vehicles (ZEV) policy on campus** The university has organized a campaign for staffs and students to use bicycles and walkways It's a way of getting around campus There are bicycle ways in the main street The road is a place to relax and exercise The bicycle ways have roofs and no cover Bicycles are parked in various school buildings and recreational areas The road is a shortcut to connect student dormitories and student affair services buildings where can ride bicycles to classroom buildings The campus also provides central bicycles for staffs and students to borrow for free Electric buses are used in public transportation in the university to reduce air emissions and environmentally friendly meet with the Green and Clean University policy The community transportation service line is transport station Suranaree University of Technology hospital line And the main route service is between the student dormitories the school buildings seat electric buses are used for coordination, employment checking jobs and other jobs in travel between buildings It is convenient to use to transfer VIP guests between buildings or places not far away or sit and watch the buildings and other exhibitions **Pedestrian path policy on campus** Suranaree University of Technology has a walkway between dormitory area, between classroom building and canteen building. In order to roaming. There is a pedestrian path between one building and another. Instead of driving motorcycles and cars.

KPI	Performance
	The university puts effort and heavily invests on transportation initiatives to limit or decrease private vehicles on campus. 1. Car sharing and shuttle bus services programs SUT rents most of its cars with contracts and provides pool services in order to discourage a use of private cars in the campus. It supports a use of clean and alternative fuel on these rental cars, such as electrical shuttle buses, cars with hybrid CNG and gasoline fuel. These cars operate on regular routes and timetables during rush hours and on demand or request during off-peak hours. The university provides and financially supports various types of shuttle buses. All these are free services for all university population. 10 Electrical shuttle buses (EV) and a diesel van operate regularly as a timetable. The rest operate as demanded or requested. The university puts effort into this shuttle service and promotes a use of clean and alternative energy. There is an estimation of 29.5 x 225 = 6,638 passenger-trip/day. 2. Terminal bus station It has a terminal station on campus which is used as a hub station for both inside and outside buses. Some private local buses operate from the university inbound and outbound to the city center of Nakhon Ratchasima. This terminal station is also used for all types of shuttle buses servicing inside the campus and as a charging station for all electrical buses. 3. A use of bicycles and walking On promoting the use of bicycle in campus to reduce air pollution and to reduce the emission of greenhouse gas as well as to minimize the transportation fuel cost, the network of bicycle lanes covering the entire area has been constructed. Relating facilities and securities are also provided to motivate the students and staffs to use more of bicycles as their means of transportation. In addition, there is also facilities of pedestrian covered walkway linking between lecture buildings and students dormitories to motivate the more use of pedestrian. Facilities/Activities: Results Bicycle lanes network: a total of 22,700 m.

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<tr><th>KPI</th><th>Performance</th></tr>
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<tr><td>Pedestrian covered walkway network</td><td>a total of 2,500 m.</td></tr>
<tr><td>Bike for Health Club</td><td>80 members</td></tr>
<tr><td>Free bicycle pool service called Golden-Orange Bicycle</td><td>246 bicycles</td></tr>
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<tr><td>SDG 12 – Responsible Consumption and production (การผลิตและการบริโภคที่มีความรับผิดชอบ)</td><td></td></tr>
<tr><td>การดำเนินงาน (Operations)</td><td>yes
green.sut.ac.th
http://green.sut.ac.th/green/2017/?page_id=9&lang=en

SUT establishes and implement many policies in an attempt to reduce the use of paper and plastic within the campus. There are seven proactive policies as follows:
1. Announcement on office-supplies conservation policy</td></tr>
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KPI	Performance
	Like green, conservation in one of SUT's core value since the foundation of this university. The policy is applied to every staffs and students in the campus. It has had proactive measures that help conserve and re-use office supplies to its highest purposes. These measures must be followed and practiced all the time in order to conserve natural resources and environment. 2. Implementation on SUT E-Meeting system The university has developed and currently use the SUT E-Meeting system which conducts all about 255 meetings year round and can save paper documents about 140,750 sheets/year. SUT E-Meeting system is based on electronic prosecution to save delivery time, meeting budget, and the use of papers for most meeting documents, agenda and attachments. All documents used in the meeting are converted into electronic files and uploaded to the SUT E-Meeting system. The system can storage, archive, disseminate, and be searchable online. 3. Implementation on SUT E-Documentation system Most internal documents which are circulated within the university are currently electronic format. The university implements on not only the SUT E-Meeting system, but it also successfully develops and implements the SUT E-Documentation system. The Administration and Documentation Unit who is responsible for disseminating and archiving all legal and official documents utilizes the system and reports that users has retrieved their E-documents 77,328 times per year which can save paper more than 318,096 sheets/year. 4. "SUT Zero-Foam Box" and "Bring My Lunch Box" campaigns The university rigorously strives the SUT's Green and Clean University policy. It currently bans a use of foam food containers within the campus. All food shops and kiosks must replace them with bio-degradable food containers such as the one made from sugar cane fibers. The university also educates and raises awareness of the dangers of foam food containers and to replace them with bio-degradable containers that are safer for health and greener. The university's Environmental Fund sells these degradable containers itself and financially subsidizes them at a low price. The food shops report that they can get rid of foam boxes around 140,400 boxes/year. In addition, it launches the "Bring My Lunch Box" campaign. There are 12 food shops has joined this campaign which is an offer of 5 baht (0.15 US Dollars) lower food price per dish for anyone who brings his/her own lunch box for the take-away. Currently the shops report a total of around 720 participants/year.

KPI	Performance
	5. “Bring My Cup” campaign Another campaign for the SUT’s Green and Clean University policy is “Bring My Cup” Campaign. It is that the 6 participating beverage shops and kiosks offers a discount of 5 baht (0.15 US dollar) per cup to those who has brought their own cups for a take-away drink. The shops report about 360 participants/year. 6. “Reuse Garbage Bag” Campaign The garbage collection task disposes a lot of black garbage bags around 120,000 bags per year. These black bags are used inside the trash bins in different sizes all over the campus. These bags themselves are waste and costs a lot of money each year. The university takes an initiative to reuse the garbage bags at least twice. They have to be washed as appropriate before reuse. This campaign can cut the amount of new bags by half or around 60,000 bags a year. 7. “SUT Say No Plastic Bag” Campaign The university has launched the “SUT Say No Plastic Bag” campaign since the World Environment Day (June 5, 2017). This enforces all 10 convenient stores, shops and kiosks to stop giving plastic bags for their customers. However, a customer could purchase a bio-degradable plastic bag for one baht. The shops will collect this money as a donation to the SUT Environmental Fund. The shops report that the reduction of plastic bags by 90% (from 163,322 to 15,837 bags per month). This policy is a win-win situation because the shops can reduce their cost of bags and the university can deposit money to the fund and the plastic waste is also reduced. Another plastic bag reduction initiative is the “Plastic Bag Donation” and “Tote Bag Use” campaigns. The first campaign is to place a plastic bag donation box in front of the shops. Any shopper who have spare bags can donate them there for others who want to reuse them. The second campaign is to encourage the use of tote bags instead of plastic bags in the convenience stores. These personal tote bags to reduce the excessive plastic waste in the campus around 2,500 bags per year. All forms of toxic wastes occurs in the university is treated professionally. They can be divided as follows. 1. Electronic toxic wastes

KPI	Performance
	The university provides electronic garbage bins in main buildings. All 5,210 kg of electronic wastes is gathered each year to be sent out and treated by a licensed agency. 2. Chemical toxic wastes SUT has concerned about waste from every laboratories which is created from teaching lessons and research. Without proper management or protocol, the waste could affect the environment and harm the operators. In this regard, the Center of Scientific and Technological Equipment has prepared safety manual for laboratory and chemical uses which includes the regulation for managing laboratory waste. It includes a systematic approach to sort out, labeling, ways to collect, and which containers are appropriate for the waste. The waste will later be forwarded to waste agencies licensed by The Pollution Control Department for disposal three times a year. All chemical wastes are collected and treated around 2,902 kg. per year. 3. Infectious toxic wastes There is a process of separating infectious waste from other waste by arranging red containers for infectious waste that is not pointed material such as gauze, blood stained cotton. These containers are red plastic bag which is tough, not easily torn, no leaks and chemical resistant. These red bags will then be put in a bin with lid and a label saying "infectious waste". The infectious waste that is pointed material on the other hand will be separated and put into a hard plastic box that is able to withstand perforation. The infectious waste from laboratories will be contained in a strong gallon tank. The operator who transports the infectious waste must wear protective suite which consists of thick rubber gloves, rubber apron, and a mask covering mouth and nose, and rubber boots. Besides, the operator will have to be trained. Finally, this waste is carried to the SUT Infectious Waste Management Power Plant which using an incinerator conforming to the Ministry of Public Health's standard. All infectious wastes collected from the SUT Hospital are 51,741 kg.per year and they are all eliminated at the power plant.
จำนวนของเสียที่จัดการ (Amount of waste generated)	1,479.794 tonnes

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<tr><th>KPI</th><th>Performance</th></tr>
<tr><td>จำนวนของเสียที่นำกลับมาใช้ใหม่ (Amount of waste recycled)</td><td>182.268 tonnes</td></tr>
<tr><td>จำนวนขยะที่ส่งไปฝังกลบ (Amount of waste sent to landfill)</td><td>none</td></tr>
<tr><td>การตีพิมพ์ รายงานเกี่ยวกับความยั่งยืน(Publication of sustainability report)</td><td></td></tr>
<tr><td>SDG 13 - Climate Action (การกระทำที่เกี่ยวกับภูมิอากาศ)</td><td></td></tr>
<tr><td>หน่วยของการใช้พลังงาน (Units of energy broken down)</td><td>Yes
http://green.sut.ac.th/green/2017/?page_id=9&lang=en
Electricity usage per year 24,193,798 kWH
Ratio of renewable energy production towards total energy usage per year 0.14%
<table>
<tr><td>Year</td><td>2017</td></tr>
<tr><td>Total renewable energy usage (KWH)</td><td>33,884</td></tr>
<tr><td>Total electricity power usage (MWH)</td><td>24,194</td></tr>
<tr><td>Renewable energy (%)</td><td>0.14</td></tr>
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<tr><th>KPI</th><th>Performance</th></tr>
<tr><td></td><td>Total carbon footprint 47.34 Tons CO_2 eq. /year
<table>
<tr><th>Item</th><th>CO_2 Emission (ton CO_2 eq.)</th></tr>
<tr><td>Electricity</td><td>20,322.79</td></tr>
<tr><td>Transportation-bus</td><td>553.50</td></tr>
<tr><td>Transportation-car</td><td>1,371.70</td></tr>
<tr><td>Transportation-motorcycle</td><td>759.84</td></tr>
<tr><td>Total Emission Per Year</td><td>23,007.83</td></tr>
<tr><td>Open Space / Total People</td><td>486.07</td></tr>
<tr><td>Carbon Footprint</td><td>47.34</td></tr>
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<tr><td>การศึกษาด้านสิ่งแวดล้อม (Environmental Education)</td><td>yes</td></tr>
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