

Sri Lanka Sustainable Energy Authority - Performance Report 2017

Activities of the institutions are carried out under three thematic areas, namely renewable energy development, energy management and energy information and awareness summary of activities under each in given below.

1. 1. Renewable Energy Department

- ❖ Total electricity generation using renewable energy is 1,715 GWh. There are 219 projects
- ❖ Under the renewable energy project approval process, progress of all the projects to which Provisional Approval (PA) and Energy Permit (EP) were issued is monitored quarterly and given assistance in resolving issues.
- ❖ Studies on Solar, Wind, Mini Hydro, Biomass and Wave Energy, etc are being carried out with the objective of providing inputs to develop renewable energy resource development plan. In addition to this, resource surveys technical evaluation for emerging technologies such as heat storage systems are carried out.
- ❖ Projects under Renewable Energy Development are given below

1.1 Solar Rooftop Promotion supported by ADB

Under this Project SLSEA is implementing Solar PV Pilot projects at public and private sector institutions with a view to catalyze and popularize photovoltaic based power generation in Sri Lanka. The public sector component primarily focuses on Engineering Faculties of the leading technical Universities. Following shows the activities completed under this project. .

- ✓ Installation of four Solar PV Rooftop Systems at University of Peradeniya, University of Moratuwa, University of Ruhuna and University of Jaffna were completed connecting 200 kWp to the national grid.
- ✓ Completed 22 solar rooftop installations at Private Sector institutions. Connections 1800kWp to the National Grid

1.2 Soorya Bala Sangramaya

- ✓ 296 Solar Energy Service Providers were registered with the SEA by end-2017.
- ✓ 135 solar systems were installed in religious places under the "RiviAruna", adding 270 kW to the system.
- ✓ Seventeen Standards on solar PV were published in collaboration with the SLSI. Three technical workshops and a workshop for service providers were conducted.
- ✓ Achievement of the 100 MW milestones under this programme was marked in a ceremony with the distinguished participation of the H. E.

1.3 Wind Resource Management

- ✓ Data collection is in progress from the wind masts in Balangoda, SeethaEliya, Kalametiya, Mullipurama, Silawathura, Nadukuda, Ponnalei, Pooneryn and Kokilai beach.
- ✓ Resource mapping is in progress. Roughness maps were prepared for SeethaEliya, Puttalam, Sooriyakanda, Jaffna and Pooneryn.
- ✓ The procurement process for wind tower maintenance contract is in progress.

1.4 Electricity Supply Reliability Improvement Project

This project is focused on improving livelihoods of the families in their lands in Northern Province, Nainativu, Analathive & Delft.

1.5 Promoting Sustainable Biomass Energy Production and Modern Bio-Energy Technologies'

- ✓ Under this project, the establishment of a fuelwood depot in Homagama was completed in 2017. Work for the establishment of two more terminals in Monaragala and Kurunegala were initiated. Completion of 24 biomass energy projects in large scale industries and SMEs.
- ✓ A Fuel Wood Growing Handbook was published for the benefit of growers at ground level.
- ✓ Initial activities for fuelwood cultivation with the Coconut Cultivation Board, in 600 ha, were carried out.
- ✓ A 3-day comprehensive training programme on Biomass Training for the Tea Sector Factory Officers.

1.6 Appropriate Mitigation Action in the Energy Generation and End-Use Sectors in Sri Lanka

- ✓ Introduction of high efficient motors , Solar PV net-metering and biogas implementation commenced in 2017.
- ✓ A marginal Abatement cost (MAC) curve was developed for the energy sector and a workshop on multi-criteria analysis and barrier analysis in NAMA interventions on the energy sector was conducted.
- ✓ 40 biogas digesters were installed. Installation of Variable Frequency Drivers (VFDs) for motors in tea factories was carried out.
- ✓ Five workshops on Quality Control in the Installation of Biogas Digesters were held at Provincial Councils.

1.7 Pooneryn Wind Farm

It has been estimated that there is nearly 5,000 km² of windy areas with good-to-excellent wind resource potential in Sri Lanka. Pooneryn is a major location where it

has been identified that there is a potential for more than 100 MW of wind. The following land areas are being surveyed, to facilitate the Pooneryn wind farm.

- 1) The coastal land belt of 200 m width with high wind potential along the east and west beaches of the Pooneryn land strip.
- 2) The land area required for proposed 2 x 100 MW solar power plants.

1.8 Research related to Solar Power Development

- ❖ Successfully completed the one year of the two advanced research projects related to technical interventions in large-scale solar power development, in collaboration with the Department of Electrical and Electronics Engineering, Faculty of Engineering, University of Peradeniya.
- ❖ Security of supply with the large scale deployment of PV in Sri Lanka
- ❖ Energy efficient utilization of PV through a DC Micro Grid

2. Energy Management

2.1 Establishment of Energy Management Systems

- ✓ SLSEA facilitates the energy conservation in industrial and commercial sectors through introducing the ISO50001 Energy Management Systems.
- ✓ Altogether 205 Energy Managers and 16 Energy Auditors were accredited. About 150 Energy Management officers in government sector were appointed as per the circular SP/PCMD/6/2015 issued by Presidential Secretariat.

2.2 Introducing Standards and Regulations

- ✓ CFLs – The revised Standard on Energy Labelling for CFLs was published. The Regulation for the revised Standard was prepared and sent to the Legal Draftsman's Department.
- ✓ Air conditioners – Draft Energy Labelling Standard was prepared and sent to Sri Lanka Standards Institution (SLSI); going to be published shortly.
- ✓ Refrigerators – Compilation of a new Standard was initiated by acquiring similar Standards from other countries. Before the full scale energy labelling is attempted, Minimum Energy Performance Standards (MEPS) for refrigerators will be prepared.
- ✓ LED Lamps – Voluntary energy label was developed and implemented for LED lamps. Draft Regulations to implement the scheme on a mandatory basis will be sent to the Legal Draftsman's Department shortly.
- ✓ Computers – Draft Energy Labelling Standard was prepared and sent to Sri Lanka Standards Institution (SLSI); going to be published shortly.
- ✓ Ceiling fans – Test lab equipment has been procured and installation of the test facility is in progress.

- ✓ A Regulation to enforce the revised Code of Practice on Energy Efficient Buildings – was drafted. Complete scheme of implementation, including a Building Ranking System was prepared for immediate implementation.
- ✓ The Guideline for Sustainable Energy Residencies in Sri Lanka was developed to pre-press level in all three languages.

2.3 Advisory and Counselling Services

- ✓ ISO 50001 audits were conducted at eight organizations.
- ✓ 44 Energy Service Companies (ESCOs) were registered under the categories for Energy Efficiency Improvement (EEI), Energy Auditing Service (EAS) and Technology Providers (TP), and the updated ESCO list is published in the web.
- ✓ A walk-through energy audit was conducted at STF Training School, Kalutara
- ✓ Detailed Energy Audits at the ITN were conducted, Machineries and Equipment Authority, North Western Province.
- ✓ Detailed energy audit at UCSC (Colombo University) is in Progress.
- ✓ Provided Consultancy Service, Training and Technical Assistance to conduct detailed energy audit at the Defence School Colombo, Pelawatta & Sevenagala sugar factories.
- ✓ Ten energy audits were completed in Government institutions in the Central Province by selected 4 ESCOs.
- ✓ Tender evaluation is in progress to select suitable ESCOs to conduct sixteen detailed energy audits in Government hospitals and institutes.
- ✓ Number of Instrument hiring days is 1,200 instrument days.

2.4 Rewarding of Achievements

- ✓ SLSEA involves in national level promotional activities through conducting the ‘Vidulka’ Energy Exhibition with the objective of Introduction of newer technologies and dissemination of knowledge. It will provide unique opportunity for energy sector organizations, equipment suppliers, manufacturers, innovators and academia to promote products and services related to energy conservation.
- ✓ Vidulka National Energy Exhibition was held from 18th to 20th November 2017 at the BMICH. The Energy exhibition consisted of sixty commercial and institutional stalls of renewable energy technologies, energy management, inventions and provided information on technologies, products, services to the general public.

2.5 Sector Specific Energy Management Programmes

- ✓ SLSEA assists to develop and implement energy management programmes at provincial level. Two programmes on energy management were conducted in the Southern and Central Provinces for 60 Factory Managers and Factory Officers in the tea sector. Programme was conducted by a selected Training institute (SLEMA).

2.6 Research and Development in Energy Conservation

- ✓ Initiatives are taken for exploring the potential of adopting new and innovative technologies for the development of energy management practices in Sri Lanka. A prototype of a standard tea withering trough including modified duct, radiators, process control and spreading mechanism was designed with the assistance of Tea Research Institute (TRI), which would help in accurately evaluating the energy performance. An MOU has been prepared to be signed with TRI.

2.7 Establishment of Pilot Projects in energy Conservation

- ✓ Tri-generation or Combined Cooling Heat and Power (CCHP) refers to simultaneous generation of electricity and useful heating and cooling from one source of energy, which is the best method available for maximum utilization of energy and it can achieve efficiencies over 80%. In this context, SLSEA explores the possibilities of introducing tri-generation for sectors such as hotels, textile and apparel, etc and industrial zones. The final evaluation for the selection of proposals is in progress.

2.8 Operation Demand Side Management (ODSM) Program

- ✓ Efficient Air Conditioning – A Circular was issued for the efficient use of A/C through the Ministry of Power and Renewable Energy. Two awareness programmes were conducted to create awareness among Energy Management Officers in the Government Sector (all island) and for Energy Management Officers in the Western Province.
- ✓ Efficient Refrigerators – A draft Regulation on ‘Phasing Out Inefficient Refrigerators from the Sri Lankan Market’ is under preparation, and being reviewed by stakeholders.
- ✓ A scheme is being developed to replace inefficient refrigerators with efficient refrigerators.
- ✓ Efficient Chillers – A meeting was conducted for the ESCOs on 31st May 2017. Data collection on chillers is being carried out. Discussion was held with Engineers from Tekzol (Pvt) Ltd and CBL to get their inputs to develop a scheme for the programme.
- ✓ Efficient Motors – A few industries were selected from the LECO area to implement this programme. A survey is being planned to be conducted in a cluster of 50 industries.
- ✓ Eliminating Incandescent Lamps – LED Lamps distribution scheme named ‘Shakthi’ has been developed. Target group of this scheme is domestic customers with average monthly electricity consumption less than 90 kWh in year 2017. It is proposed to distribute 10 million LEDs for eligible consumers through CEB, LECO representatives. Cost of bulbs will be recovered in instalments within 24 months, without interest. The selection of a suitable supplier of LEDs through competitive bidding process has reached conclusion. Details of participated account holders,

returned Incandescent bulbs and distributed LEDs need to be gathered for monitoring, saving calculations, LED failure replacement and post evaluation. Bulb dissemination scheme has been fully developed, including the Android App and related software required for hand-held devices and documentation.

- ✓ Green Building – The complete scheme of implementation, including a Building Ranking System in accordance with the revised Code of Practice on Energy Efficient Buildings was prepared for immediate implementation. A scheme to disburse LKR 350 million for solar rooftop installations in selected Government buildings was developed, and procurement process involving seven geographical clusters and four Service Providers was completed.
- ✓ Smart Home – The Guideline for Sustainable Energy Residencies in Sri Lanka – 2018 was developed to pre-press level in all three languages. An interest rate buy-down scheme to promote the solar rooftop programme ‘SooryabalaSangramaya’ was implemented utilising the allocation of LKR 1,500 million. Twelve banks have been actively engaged by end-2017.

3. Energy Information and Awareness

3.1 Energy Information Analysis

- ✓ Sri Lanka Energy Balance 2016 has been compiled. Printing in progress. Web was upgraded with 2016 data.
- ✓ Updated Energy Balance Website
- ✓ End-user Energy Consumption Assessments
- ✓ The survey plan for the island wide petrol shed survey was formulated with the Dept of Census and Statistics. Report is under compilation.

3.2 National Energy Symposium

- ✓ The National Energy Symposium was held on 19th, 20th, November 2017. 25 research papers were presented under two themes, namely, energy efficiency and Renewable energy. Methodologies to obtain R&D inputs to the national programmes in these areas were also discussed with the participation of policy makers, researchers, industrialists and academia. Through ‘National Innovation Forum on Biomass Energy’ new innovations related to biomass sector were concerned.

✓

3.3 Development of an Energy Education Program

- ✓ The School Energy Clubs programme is the key programme of the Energy Education Programme. A total of 3,000 Clubs have been established islandwide.
- ✓ School Energy Clubs Awards – 2016 was successfully held on 28th December 2017 at BMICH among a distinguished gathering.

- ✓ Students who showed an outstanding contribution to advance, promote the use of innovative approaches related to energy in inventions, exhibits, projects, researches, surveys, digital posters, short films, drama and debates, were awarded with cash prizes and certificates.
- ✓ Awards were given to 550 students selected from 88 government schools covering the nine provinces. Further awards were given to the Best Energy Teacher, In Service Officer & Deputy/Assistant Director of Education in the nine provinces in order to appreciate their commitment shown towards the SEC programme.

3.4 Communication Programme

- ✓ Participated ‘Tirasara Lanka’ exhibition at BMICH conducted by Presidential Secretariat and National Youth Exhibition in Trincomalee.
- ✓ Participated 7 nos school exhibitions.
- ✓ Media Guide for Energy Journalist Awards has already been developed by Mass Communication Division of the University of Kelaniya approval of Secretary of Media to the ministry of Mass Media is expected.
- ✓ Environment Day programme was organized in Kegalle

3.5 Media Programmes

- ✓ The first phase of the energy and environment course for journalists was completed and seventeen journalists were awarded for successful completion. The second phase of the programme was launched at BMICH, on 3rd May 2017. Fifteen journalists are being trained and the programme will be concluded in April 2018.
- ✓ Article series on energy conservation has been published in ‘Navaliya’ Newspaper.
- ✓ Article series on solar energy has been published in ‘Vidusara’ Newspaper.

Measures taken by the Sri Lanka Sustainable Energy Authority to rectify the shortcomings highlighted in the Audit Queries and Audit Reports - Auditor General's Report - 17.10.2018

Audit reference number	The matters indicated as per the 2017 audit report	The actions taken in respect of such matters
2 2.1	<u>Presentation of financial statement</u> Financial statements for the year 2017 had not yet been submitted for audit as of 30 th August 2018.	The financial statements for the year 2017 have been prepared and submitted to the audit.
2.3	<u>Receivable and payable accounts</u> (a) The amount of Rs. 8,033,270 to be recovered from the Ceylon Electricity	The Ceylon Electricity Board (CEB) agreed to pay this amount of outstanding at the Audit and

	Board for RCL had not been recovered until 30 th August 2018.	Management Committee meeting held in the Ministry.
2.4	<u>Non-compliance with laws, rules, regulations and management decisions</u> (a) A total amount of 54,263,517 was allocated in year 2015, 2016 and 2017 to purchase a land for construction of an office building and preparation of plans for the building by the Authority, but such amount had not been withdrawn from the investment of the Fund.	Rs. 54,263,517/- was spent from the funds of this Authority to purchase a plot of land. However, it is expected to reimburse such amount when the project is carried with ADB in future.
	(b) - (i) The inventory registers had not been maintained.	The inventory registers are maintained.
	(ii) Assets had not been physically verified.	The physical verification of assets for 2017 has been completed.
	(c) (i) A fixed asset register had not been maintained as per the relevant circular.	This could be corrected in 2018.
	(ii) No fixed asset register for computers, equipment and software had been maintained.	Fixed asset registers in respect of computers, accessories and software has been maintained.
	(d) Rs.7,980,000 had been paid as professional allowance from August 2016 to May 2018 to the officers holding post of engineer, without proper approval from the Department of Management Services.	Request for the payment of professional allowances with the approval of the Board of Directors has been forwarded to the Department of Management Services. However, no formal approval has been granted so far and the Department of Management Services has informed that it would be responded by taking the matter into consideration.
2.5	<u>Transactions not supported confirmed by an adequate authority</u> (a) Out of the amount of Rs. 7,334,354 received from European Union under 'Switch Asia' Program, Rs. 3,135,202 had been paid to the all employees of the Authority as professional allowance in 2010 and 2011. The order issued by the Secretary of the Ministry on 3 rd December, 2012 to recover this unauthorized payment made, from the relevant or responsible officers, but had not been carried out it until 30 th September 2017.	Several letters have been sent to the Treasury through the Secretary of the Ministry for approval in this regard. A detailed report was sent to the Department of Management Services on 06 th November 2017.

	(b) The new Director General recruited on a one year contract basis was paid a monthly salary of Rs. 250,000 without the approval of the Department of Management Services, as the case is only Rs. 98,215 had been paid to him.	It has been decided to pay the salaries subject to the approval of the Board of Directors. However, the approval has been sought from Department of Management Services to extend it for a second time.
3.1.1	<u>Operational review</u> <u>Performance</u> (a) A Corporate Plan had not been prepared in terms of Section 5.1.2 of the Public Enterprises Circular No. PD/12 dated 02 nd June 2003.	The Authority has prepared a 10 year plan for 2015-2025. According to the Public Finance Circular No. 01/2014, it was decided that there is no need for a Corporate Plan for the Authority.
	(b) The progress of the annual action plan had not been reviewed and also a report as at the end of the year.	The report has been prepared after reviewing the progress of the programs implemented during the year 2017 and such report has been forwarded to the Central Bank through the Ministry to take as base in preparation of the Annual Report of the Central Bank.
	(c) The Authority had not prepared a human resource development plan.	Once the scheme of institutional recruitment finalized, arrangements will be made to prepare a performance based training plan and human resource development plan.
3.1.2	<u>Operation and review</u> (a) (i) Equipment purchased in the period of 2008- 2012 the accuracy and quality of the information obtained using these measuring instruments is not satisfactory as the equipment had not been repaired.	The equipment in defect and the equipment to be calibrated have been identified and repair of the defective equipment must be done by agents of the respective equipment. The calibration of some instruments may only need to be done by agents in overseas. Since it will have to be costly to replace it, it is being planned to purchase new equipment instead. Some instruments have been calibrated and certified by the Sri Lanka Standards Institute.
	(ii) Out of these items, action had not been taken to dispose, repair the equipment which had been found to be defective in 2017 board of survey or purchase new equipment.	Defective equipment was identified in 2017 and necessary arrangements were made for procurement. But due to delays in procurement, it was not able to do so in 2017. Arrangements have been made to sell the defective equipment identified in the year 2018.
	(iii) The charge levied in renting out the energy measuring equipment had not been revised from 2010 to 2018.	The equipment are provided at reasonable prices to the institutions that use such equipment. Our Authority is taking steps to increase the energy efficiency of the country by expanding this service. Based on these factors, the charge levied on renting energy measuring equipment has not been revised from 2010.

	<p>(iv) It was observed during the audit that due to the employment of only two officers in the energy services sector, it is impossible to carry out the supply of services by re-receiving of equipment systematically.</p>	<p>The required employees for the Staff are to be recruited through revised scheme of institutional recruitment. Arrangements have been made to rectify the deficiency through it.</p>
	<p>(b) Though total amount of Rs.74.787 millions of provision had been arranged from Sustainable Energy Fund for 3 solar power projects and 3 solar power energy efficient improvement projects, 4 projects remained without operation even by 31st December 2017, and as a result, the entire provision was found unutilized. Only from 0.2 to 1 percent of performance in 2 projects was observed.</p>	<p><u>RE/03/01 - Study on a Smart Grid</u> When taking the practical issues into consideration, this system is easy to introduce new creation rather than the existing one. However, adoption of a smart grid system for an existing system is a very complicated issue in terms of the practical matter and therefore it was identified an issue which should be handled gradually.</p> <p><u>RE/08 - IFC Solar Project</u> This project was carried out for a short term with IFC but as this institution stopped its support suddenly, it was unable to disburse the allocated fund.</p> <p><u>RE/10 - Hambantota Solar Park</u> Funds were allocated for the establishment of a renewable energy park in Hambantota and accordingly a land was declared as an energy development area. However, due to a new development plan introduced for Hambantota, we could not work on our project.</p> <p><u>EM/05/02 - Improvement of Energy Utilization Efficiency in Hotel Sector</u> As a very few number of engineers and other officers are available in the Energy Management Division and engaged in other activities, audit, consultancy and awareness etc. it is difficult to allocate time for this and therefore it was unable to carry out this program in 2017.</p> <p><u>EM - 06 Development of Standard Withering Trough</u> The approval of the Board of Directors for this project was granted in February 2018 and the Memorandum of Understanding in respect of that project signed in May 2018. Action will be taken to complete this task quickly in future.</p>

		<p><u>ST- 02 Wide Petrol Shed Survey</u></p> <p>Only 186000 pilot survey data finalized in 2016 to determine these samples were to be analyzed. It was able to complete this analyzing process by 2017. As a result of this, it was unable to implement the said survey within that year. It is kindly informed that this survey would be implemented in future.</p>
3.2	<p><u>Management activities</u></p> <p>(a) The Authority had acquired a land under lease for the purpose of constructing its head office. The condition that the lessee would be entitled to the property if he failed to complete the particular development within 2 years of period was included due to having entered into a lease without obtaining legal advice. Although 2 ½ years have passed as at 30th September 2017, only the design work of the building had been done.</p>	<p>Two years of time has consumed to obtain the approval which should be granted by the Urban Development Authority. However, the foundation stone was laid down in March 2018 to start the construction work.</p>
	<p>(b) Though Rs.160,090 was paid as pension gratuity to an employee who had been recruited on a contract basis where service period lapsed by 5 years, annual allocation had not been made for that purpose.</p>	<p>The Authority is calculating annual gratuity based on the number of employees engaged in permanent service. On the necessity of service, this officer had served for 5 consecutive years and therefore the Authority was compelled to pay this officer with gratuity.</p>
	<p>(c) Though the Secretary of the Ministry as Chief Accounting Officer directed to recover Rs. 2,171,760 of salary and allowance excessively paid from 1st October 2007 to 30th September 2011 in contradiction to the provisions of the relevant circulars, according to the report on the inquiry carried out with regard to error occurred in salary conversion of the staff from the inception of the Sustainable Energy Authority, from the relevant officers, accordingly no action had been taken by the Authority to recover or correct the same.</p>	<p>The Board of Directors has decided that the report on the inquiry carried out in respect of the error occurred in salary conversion of the Staff done from the beginning of the Sustainable Energy Authority cannot be accepted. The Audit and Management Committee of the Authority decided to appoint a new committee for inquiry and act on its recommendations.</p>
	<p>(d) According to an agreement signed on 28th September 2007, a sum of Rs. 7,956,800 had been paid to an external party in 2007 for the development of</p>	<p>An outside party to this project was continuously reluctant to carry out the task and therefore steps have been taken to go for a legal action against that party. Necessary arrangements have been made to</p>

	<p>three prototype electric vehicles within 18 months. However, until 30th August 2018, no developer had been able to develop even a single vehicle, and no necessary legal action had been taken to get those 3 vehicles developed or recover the money paid to such party.</p>	<p>obtain an arbitrator's service for this, as the Attorney General's Department instructed.</p>
	<p><u>Wind Measuring Towers</u> (e) Although sufficient data have been obtained from the six towers installed before 2012, wind power resource mapping and design using these data has not been completed until 31st August 2018.</p>	<p>In preparation of wind resources map under the wind resources survey program, the following should be carried out:</p> <ul style="list-style-type: none"> • First collecting data • Data analyzing • Making data in order according to its degree • Collecting data in line with relevant software to prepare maps <p>For this, sufficient time is required. After a sufficient time, it is expected to prepare wind resource maps. For the purpose, another 08-10 months of time is needed.</p>
	<p>(d) Any work plan had not been prepared by the Authority to settle the amount of Rs. 897,025,999 as at 30th December 2010 payable to the Ceylon Electricity Board.</p>	<p>This amount will mean the difference between the cost to the power plant operators using renewable energy sources based on the cost-based tariff principle and the 90% of the cost of generating power from the average generating combination. The Public Utilities Commission has agreed in 2010 to collect this amount from consumers. We are of the view that there is no need to take further action.</p>
<p>3.3</p>	<p><u>Inactive and Underutilized assets</u> (a) Rs. 4,548,176 of outstanding balance under Switch Asia program was to be repaid, and Rs. 4,548,176 and over Rs.150,000,000 had been deposited respectively in a current account and in a saving account of two state banks.</p>	<p>The remaining funds received under the Switch Asia program have not been used for any investment purpose as the COPE committee is currently questioning about such funds.</p>
	<p>(b) A cab and a motorbike owned by the Authority have been inactive for more than three years and it had been recommended by Lanka Automobile Association in its valuation report dated 17th June 2015 to dispose the cab. However, no action was taken until 30th August 2018 to repair or dispose of these vehicles and it had been observed that the cab was in a dilapidated condition due to being kept in an open space.</p>	<p>It has been referred to the Institutional Procurement Division on 27.02.2018 for disposal of the vehicle. A three-member committee has been appointed for this purpose and upon receiving the report of the committee, further task will be carried out.</p>

	(c) Sampoor and Mullipuram Wind Masks removed on the recommendation of relocation were transported to the premises of Keppetiwalaane owned by Asoka Construction, the Service Provider without any agreement and though there was no document evidence which proves that the equipment removed from those Wind Masks were handed over to the Authority, the funds had been released to the supplier. The Authority had failed until August 2018 to reuse those removed equipment or appropriately act in that regard.	Parts of the towers have been kept in the premises of the service provider under our supervision. Nothing is paid for them. Many of the removed equipment cannot be reused, but such equipment is under the custody of the Authority.
	(d) Equipment in value of Rs. 915,625 out of such equipment in worth of Rs. 1,775,025 purchased in month of February, 2016 for Nadukkuda Wind Mask had not been utilized up to the month of August 2018 and other equipment had been installed in 11 months later.	As it is to purchase this equipment from foreign countries, time has been consumed. The equipment in value of Rs. 915,625 has been installed in Nadukkuda Wind Mask as essential equipment. Other equipment is under the hand of the Authority to use whenever necessary.
3.4	<u>Staff administration</u>	
	(a) An approved scheme of recruitment for the Authority had not been prepared and approved.	The scheme of recruitment has been sent to the Department of Management Services for its approval. It is currently being revised.
	(b) There was 136 staff of approved cadre for the Authority, and the actual staff as at 31 st December 2017 was 103. Accordingly, there were 33 vacancies. Of these vacancies, there were 3 posts of Directors, 4 posts of Divisional Head and 12 post of Management Assistant.	Continuing scheme of institutional recruitment has been temporarily stopped as there is no approved scheme of recruitment. The new scheme of recruitment will be forwarded to the Department of Management Services, after receiving the approval from the Board of Directors.
	(c) Appointments had been done for 3 out of three posts of Director and 4 posts of Divisional Head vacant as above during the years of 2013 and 2014 by the Chairman of the Authority with the approval from the Board of Directors which is the appointing authority of the substantial posts and in contradiction of the provisions of the Establishment Code of the Democratic Socialist Republic of Sri Lanka. Rs. 2,903,361 had been paid as acting allowance from 2013 to 2017.	These appointments have been made by the former Chairman of the Board of Directors with the recommendation of the Head of the Ancillary Services Division, Deputy Director General (in charge of Administration Division) and Director General. Acting appointments have been extended as permanent appointments cannot be granted as no approved scheme of recruitment has been approved. As such, the scheme of recruitment of the institution cannot be confirmed as it has not yet been approved.

	(d) Further, without the approval from the Board of Directors, Rs.2, 610,880 from year 2013 to year 2016 for 6 posts in acting capacity in the Authority as a fuel allowance and Rs. 4,210,000 from year 2015 to 2017 for one Director in 03 posts of Divisional Head had been paid.	As per the guidelines issued by the Department of Management Services, the officers who have been appointed to these acting appointments have fulfilled the required qualifications and therefore once the scheme of recruitment is approved, action will be taken to grant permanent appointments and cancel the acting allowance as per the scheme of recruitment. Further, three officers appointed for acting are in the HM-1-1 salary code and they have been approved in terms of the Circular No. PED/1/2015 to use official vehicles and to obtain fuel allowances from 25/05/2015. Accordingly, on an acting basis, official vehicles have been allocated only for two officers.
	(e) It had been failed to achieve the performance target of maintenance wind masks, data collection through such wind masks, data collection through software and maintenance of files etc. of planned for 2017 as one and only technical officer functioned from the beginning of 2017. In the audit, it was found to have an adverse impact on future performance.	Adequate time is needed to prepare the data for 2017 as a percentage. There is no sufficient staff for this purpose and since the scheme of recruitment of the Authority will be in place from 2016 and therefore there will be a shortage of manpower for this process.
4 4.1	<u>Sustainable development</u> A suitable criteria had not been identified through the action plan to measure the differences and the progress between identifying the targets and achieving them in accordance with the agenda pertaining to the sustainable development goals of the United Nations and relevant affordable and clean energy supply.	Both energy conservation and renewable energy development are important in achieving the Sustainable Development Goals of the United Nations. All projects and programs implemented by the Sri Lanka Sustainable Energy Authority (SLSEA) cover both sectors, so all the programs undertaken by the Authority will contribute towards achieving the Sustainable Development Goals.
5.1	<u>Procurement and contract procedure</u> (a) It was observed that the Authority had prepared estimates exceeding the requirements of the institution when prepared the procurement plan.	The procurement plan was prepared according to the action plan of the Authority. This shortage has occurred due to the lack of other factors that are required for the implementation of the plan. As this plan could not be implemented fully, this deficiency has occurred. It is kindly informed that action will be taken to prepare the said plan taking this situation into consideration.

	(b) Although time frames have been identified in the procurement plan, there had not been made systematic procurement during those periods.	The Authority has not been able to recruit the required number of employees to its full capacity. As such, serious problems have arisen in implementation of the plan in a timely manner. It is kindly informed that this situation will be corrected with increase in cadre to a required extent once the scheme of recruitment is approved.
	(c) According to the procurement plan of 2017, though it was planned to carry out 50 supplies, but only six supplies had been made.	As the Authority provides services across a variety of sectors, it has been compelled to engage in the programs referred by many agencies, ministries and other parties. It is kindly informed that action will be taken to control these external activities in future.
6	<u>Systems and control</u> (b) Special attention should be paid to the following systems and areas of control. Accounting, Financial Control, Debt Control, Human Resource Management, Project Implementation, Asset Management, Information System Management and Vehicle Control	Special attention will be paid to the areas pointed out by the Auditor General and in the meantime the weakness will be identified and corrected.

Measures taken by the Sri Lanka Sustainable Energy Authority to correct the shortcomings highlighted in the Audit Queries and Audit Reports - Auditor General's Report - 28.06.2019

Audit reference number	The matters indicated as per 2017 audit report	The actions taken in respect of such matters
2.2.1	<u>Comments on Financial Statements</u> Financial statements for the year under review had not been submitted to the Auditor General on time.	This is which occurred due to shortage in Staff of this Authority. There was no a finance head and this was major reason for this. Financial statements with due approval were submitted on 17 th January 2019 to the Auditor General.
2.2.2	Fully depreciated but further usable properties, plants and equipment had not been disclosed. If it is an error in estimation, such error was not rectified and revaluation of the properties had not been done.	Average value of the fully depreciated but usable properties, plants and equipment is being accounted in terms of Sri Lanka Public Sector Accounting Standard No.7 and necessary action also is being taken to present it in the financial statements of 2018.
2.2.3	(a) (i) Rs.47,000,000 was obtained from Energy Fund to purchase a plot of land. However such amount was identified as a receipt of surcharge and accounted in the statements	The financial results for 2015 was Rs. 47,000,000. In due course, the adjustments will be made to the forthcoming statements of financial performance through the statement of

	of financial performance of 2015 and therefore the surplus of that year had been overstated in the accounts by Rs. 47,000,000	mass variation.
	(ii) After deduction of Rs. 9,242,483 instead of Rs. 8,345,683 incurred for procurement of intangible assets, the outstanding balance of Rs. 41,247,949 was credited to the statements of financial performance and therefore Rs. 896,800 had been understated in the statements of financial performance. As a result of this, the surplus in year 2016 had been understated in the accounts by such amount.	It is expected to rectify that error in the final accounts of 2018.
	(d) Rs. 51,800,357 of loan released for a project operated under the loan scheme of Asian Development Bank, though no liability of recovery is delegated to the Authority, such amount had been shown under non-current liability in the financial statements as a loan obtained by the Authority.	Action has been taken to write off the loans issued under this project from the financial statements of the year 2018.
	(e) Though separate project accounts were prepared for the projects operated under the loan scheme of Asian Development Bank, relevant income and expenditure had been accounted in the income statement of the Authority.	Action has been taken to write off the income and expenditure pertaining to the projects from the income statement as pointed out by the Auditor General.
	(f) When depreciation was made in the year under review, it had been done in contradiction to the depreciation policies of the Authority.	Due to the difficulty in obtaining information on the assets to be depreciated during the full year of depreciation for the year 2017, depreciation was calculated based on the depreciation provisions identified in the financial statements of the previous year. This situation will come to a normalcy gradually by 2019 as the Authority's asset register is updated.
	(g) The income and the interest income to be credited to Energy Fund was included into the statements of financial performance and as a result, the surplus had been overstated by Rs. 37,504,984.	The identified amount was correctly credited to the Energy Conservation Fund and the Guarantee Fund through the statement of mass change. Interest income should be taken into the income statement / financial statement of the Authority under other income.

2.3	<p><u>Unexplained variations</u> Rs. 372,333 of a difference between the balance of Guarantee Fund as at 31st December 2017 and the balance of investment as to that date not explained was observed.</p>	<p>In the accounts of 2018, action has been taken to correct the amount of Rs. 372,333.00 between the balance of Guarantee Fund and the balance of investment indicated under non-explained difference in the audit report.</p>
2.4	<p><u>Receivable and payable accounts</u> (a) An advance of Rs. 13,348,087 was released for zonal education programs in 2016, however no action had been taken up to 31st December 2017 to settle Rs. 6,882,412 out of such advance.</p>	<p>Letters have been forwarded to the relevant institutions to settle these advances.</p>
	<p>(b) Action had not been taken by the Authority to settle the amount being carried forward for a long period from the accounts of other payments and accrued expenditure or make any other arrangement in respect of such amount.</p>	<p>Letters of verification have been sent to the suppliers in respect of other payments and accrued expenses standing for more than 5 years and necessary action is being taken to settle such amount.</p>
2.5	<p><u>Non – compliance with Laws, Rules, Regulations and Management Decisions</u> (a) (i) Fixed assets register had not been maintained and updated.</p>	<p>The fixed assets register is being updated as per the Treasury Circulars.</p>
	<p>(ii) A fixed assets register in respect of computers, accessories and software had not been maintained as per the relevant circular.</p>	<p>Fixed assets register in respect of computers, accessories and software is maintained.</p>
	<p>(b) Draft annual report with financial statements had not been submitted to the Auditor General.</p>	<p>A draft annual report with financial statements of 2019 has been sent to the Auditor General. Action will be taken to correct this error.</p>
3.1	<p><u>Financial Review</u> Financial results for the year under review experienced a surplus of Rs.51,702,295 and similar to that the surplus in the previous year was Rs.6, 463,693 and as a results, when compared to the previous year, an increase of Rs.45,238,602 had been observed in the financial results of the year under review. The total amount mentioned in the 2.1.3(a) paragraph of this report was Rs.37,504,984 and error in accounting had been a reason for such increase in the financial results.</p>	<p>Interest income of Rs. 37,504,984 for the financial statements of the year under review is included in the statements of financial performance of the Authority for the year under review. The amount of interest income under other income is correctively shown in the financial statement of the Authority. This is because the interest income receivable to the Authority during the year through its activities.</p>
4	<p><u>Operating Review</u> Out of 10 activities mentioned under on going concern, 08 activities in value of Rs.15, 948,876 not operated from many years and no expenditure made even in 2017 were observed in audit.</p>	<p>5 of the 8 projects have already been completed.</p>

5	<p><u>Budgetary Control</u> It was observed that the budget had not been used as an effective instrument of management control.</p>	<p>As it has been indicated by the Auditor General, action will be taken to prepare a necessary method to implement a systems of financial control based on the budget and the same will be made effective from year 2019.</p>
6	<p><u>Systems and Controls</u> Special attention should be paid on the field of Accounting, Systems and Controls observed in the Audit.</p>	<p>By paying attention on the areas pointed out by the Auditor General, action will be taken to direct them towards achieving relevant objectives and identify the weaknesses and correct them. The computer ledger system highlighted here has been introduced. Accounting matters will be carried out through that systems from 2019.</p>

03. A summary of the medium term measures expected to be taken to improve the performance of the organization

3.1 Updating the Geographical Information System to facilitate the issuance of energy permit.

The Authority's primary objective is to measure the location, timing and scale of renewable energy sources in Sri Lanka and provide investment opportunities to developers. All such data and information provided so far has been incorporated into an online geographic information system for the public to know.

3.2 Declaration of Energy Development Areas

Renewable energy sources in Sri Lanka occur in different areas but cannot be developed them in all areas due to other land use activities. The declaration of energy development areas will enable the use of lands that do not cause issues for renewable energy development.

3.3 Publishing data on energy use in Sri Lanka

The National Energy Account, or Energy Balance, is a document that compiles all the data and information on various sources of energy used in the country since 1971. Sri Lanka Sustainable Energy Authority (SLSEA) has been carrying out this process since the 1990s. The Authority has been able to publish the same document on energy consumption in a year as a web-based database as well as a printed publication.

3.4 Measurement of wind and solar energy and identifying areas where it can be developed.

Solar and wind power are identified as the major renewable energy sources in Sri Lanka, but it is difficult to develop those sources without realizing the variations and time variations. Therefore, a long-standing network of towers will be set up across the country to provide data for developers to quantify the nature of these sources.

3.5 Enactment of Regulations for the Supply of Energy Labels for equipment that are used for energy

Energy Labels for CFL Lamps, have been introduced for the easy communication of the complexity of the quality and efficiency of a particular electrical device. Preliminary arrangements have been made to provide that for ceiling fans with double-walled tubular fluorescent lamps and bulbs.

3.6 Establishment of a Laboratory for Energy Efficiency Measurement.

Several laboratories have been set up to perform various tests to determine the efficiency and other standards of the most commonly used electrical components. These laboratories are operated by universities as well as other government institutions.

3.7 Training of Energy Managers and Energy Auditors.

The training will be carried out to provide the technical services of a number of professionals to Sri Lanka to provide the services required to implement the provisions of the CAA Act.

3.8 Taking steps to appoint Chartered Energy Auditors.

Many of these Chartered Auditors are required to carry out the provisions of the Act for mandatory energy auditing of energy consuming organizations and their training is continued in groups.

3.9 Provision of Alternative Energy Curriculum for Technology Level Studies

It aims to equip future citizens with knowledge on sustainable energy resources and their use in creating an energy conscious nation.

3.10 Introduce energy subject to school syllabus and establish school energy clubs.

It is a program that focuses on the student community to realize the complex aspects of energy use as well as practical experiences.

3.11 Assistance in promoting energy research in universities and research institutes

The objective is to direct the universities and other research institutions operating in Sri Lanka for energy research and development and to prepare them for the national priority in the field.

3.12 Introduce energy related improvement measures to improve the quality of small industries.

The objective of this project is to change the attitude of productivity of SMEs which is considered to be the main stream of economic development in Sri Lanka.

3.13 Development of Energy Education Program.

The progress of the said will be reviewed in 2016 at the zonal, provincial and national levels and the programme implemented in future.