

**UNIVERSITY OF ENERGY AND NATURAL  
RESOURCES (UENR), SUNYANI-GHANA**

**REGIONAL CENTRE FOR ENERGY AND ENVIRONMENTAL  
SUSTAINABILITY (RCEES),**



**FIRST FIVE-YEAR STRATEGIC PLAN**

**2020 - 2024**

**JUNE, 2020**



## **TABLE OF CONTENTS**

<b>SECTION 1 – OVERVIEW OF THE UNIVERSITY AND THE CENTRE.....</b>	<b>3</b>
1.1 - INTRODUCTION.....	3
1.2 - THE VISION, MISSION AND CORE VALUES OF THE UNIVERSITY.....	4
1.3 - ESTABLISHMENT OF THE CENTRE .....	5
<b>SECTION 2 - SCOPE AND FOCUS.....</b>	<b>6</b>
2.1 - VISION STATEMENT .....	6
2.2 - MISSION STATEMENT .....	6
2.3 - CORE VALUES .....	6
<b>SECTION 3 - STRATEGIC FRAMEWORK.....</b>	<b>7</b>
3.1 - INTRODUCTION .....	7
3.2 – STRATEGIC ANALYSIS.....	8
3.3 - STRATEGIC GOALS, OBJECTIVES AND ACTIONS.....	11
<b>SECTION 4 – PERFORMANCE MONITORING PLAN.....</b>	<b>18</b>
<b>SECTION 5 – FINANCIAL IMPLICATIONS.....</b>	<b>26</b>
5.1 - BUDGET, PROJECTED REVENUE AND EXPENDITURE OF RCEES: 2020 - 2024.....	26
5.2 - BUDGET FOR THE STRATEGIC PLAN OF RCEES: 2020 - 2024.....	27



## SECTION 1 – OVERVIEW OF THE UNIVERSITY AND THE CENTRE

### 1.1 - INTRODUCTION

The University of Energy and Natural Resources (UENR) was established by an Act of Parliament (ACT 830, 2011) as a Public University in Ghana. UENR operates a multi-campus system with its main campus including the Central Administration located in Sunyani. The other campuses and field training stations are sited in Dormaa, Nsoatre, Kenyasi, Mim, Bronsankoro, Kyeraa and Bui. The University of Energy and Natural Resources seeks to be a Pre-Eminent Research and Practically Orientated Energy and Sciences Educational Institute.

The University of Energy and Natural Resources, Sunyani comprises seven (7) Schools: Natural Resource, Agriculture and Technology, Science, Management Sciences and Law, Engineering, Geo-Sciences and Graduate Studies; and two (2) Centres namely; Earth Observation Research and Innovative Centre (EORIC) and Centre for Climate Change and Gender Studies (3CGS).

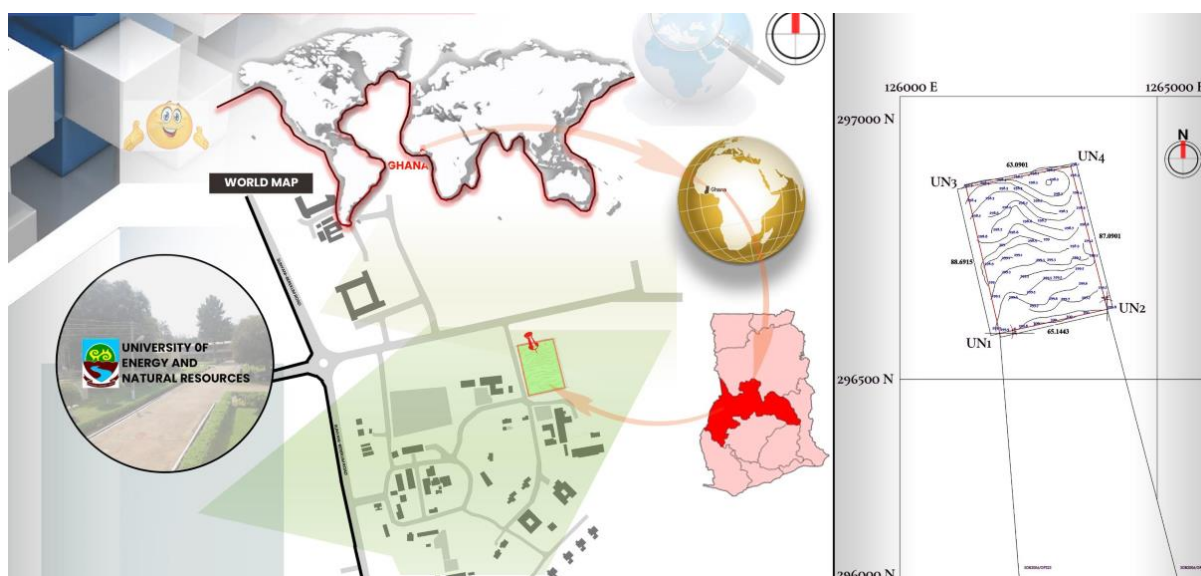


Figure 1. Location of UENR

## 1.2 - THE VISION, MISSION AND CORE VALUES OF THE UNIVERSITY

The Vision of the University is ***“To become a world-class institution for generating, advancing and applying knowledge in energy and natural resource sciences.”*** This statement is succinct and describes exactly our long term focus and expectations.

The primary Mission is ***“To promote the development of human resources and skills required to solve critical energy and natural resources challenges of society and undertake interdisciplinary academic, research, and outreach programmes in engineering, science, economics and environmental policy”.***

The University sees it as essential towards the achievement of its vision and the promotion of mankind.

The University of Energy and Natural Resources is guided by the following core values:

- i. Promote innovation, creativity, freedom of thought and creative expression;
- ii. Operate with integrity, commitment and transparency;
- iii. Promote conservation of energy and the environment;
- iv. Establish partnerships with stakeholders in skills, knowledge generation and application;
- v. Responsive to the needs of our students and partner communities; and
- vi. Promote and exemplify sustainability concepts across all University courses/programmes.



Figure 2. Aerial View of UENR Main Campus



### 1.3 - ESTABLISHMENT OF THE CENTRE

The University of Energy and Natural Resources aims at providing leadership and management in terms of human resource in energy and natural resources and to become a Centre of excellence in these crucial areas of development. This is a true reflection of the overall Strategic Plan of the University.

The Mandate of the African Centre of Excellence (ACE) on Energy and Environmental Sustainability aligns with that of UENR. Consequently, the Regional Centre for Energy and Environmental Sustainability (RCEES) was set up at UENR in response to the World Bank's call for proposals for Africa Centre of Excellence (ACE).

The RCEES seeks to be the best international centre on issues of Energy and Environmental Sustainability in Africa and beyond. The Centre runs accredited tailored-made MSc/MPhil and PhD degree programmes in collaboration with its partner Universities and Industry at Sunyani, Ghana.



Figure 3. Architectural Drawing of Proposed RCEES Facility

## SECTION 2 - SCOPE AND FOCUS

### 2.1 - VISION STATEMENT

The Vision of RCEES is: “to be the leading internationally accredited Centre of Excellence that provides Quality Research and Postgraduate Education in Energy and Environmental Sustainability.”

### 2.2 - MISSION STATEMENT

The Mission Statement of the Regional Centre for Energy and Environmental Sustainability: “RCEES is a World Bank funded Africa Centre of Excellence in Energy and Environmental Sustainability based in Ghana. Our mission is to provide Excellent and Quality Postgraduate Education, Discover, Preserve and Disseminate cutting-edge interdisciplinary Research. RCEES also aims, through Training and Capacity Building, Consulting, Professional Development, and securing Grants and Donor funding to enhance the lives of our students, industry and society”

### 2.3 - CORE VALUES

The Core Values of the Regional Centre for Energy and Environmental Sustainability:

**R: Responsive:** Innovative ways to solve energy and environmental challenge.

**C: Collaborative:** Engage and Build partnership with stakeholders.

**E: Equality:** Create an environment that promote equal opportunity, gender balance and diversity.

**E: Excellence:** Demonstrate world class leadership in research and teaching.

**S: Sustainability:** Maintain excellence in higher education, particularly in STEM.



Figure 4. Architectural Drawing of Proposed RCEES Facility (FrontView)

## SECTION 3 - STRATEGIC FRAMEWORK

### 3.1 - INTRODUCTION

The application of the PESTLE (Political, Economic, Social, Technological, Legal, and Environmental) and SWOT (Strengths - Weaknesses - Opportunities –Threats) analytical frameworks guided the formulation of strategic direction. It provided in-depth understanding and perspective on the environment in which RCEES functions as well as factors that can affect their growth or operations.

The outcome was the development of Vision, Mission statement, Core Values, Strategic Goals and Objectives for RCEES. This framework was further developed into Strategic Actions and a Performance Monitoring Plan.

Strategic Goal setting was included as part of the process of setting the strategic direction. The Strategic Goals were derived from the Vision, Mission and Core Values of RCEES. Following the setting of Strategic Goals, another component of the Strategic Planning process was setting of Strategic Objectives. This provided a foundation on which strategy would be communicated and an operating plan developed.

Strategic Objectives were established before actions, specific initiatives, processes, and projects were defined, designed, integrated into an overall operating plan for implementation. Thus, the Strategic Objectives crafted for RCEES are achievable, assignable outcomes with continuous improvement potential to manage on-going operations.



Figure 5. Members of RCEES Steering Committee and Management

## 3.2 – STRATEGIC ANALYSIS

### IMPACT OF COVID-19

The impact of the coronavirus disease 2019 (COVID-19) global pandemic cuts across all identifiable elements in the RCEES operational environment – **political, economic, socio-cultural, technological, legal and environmental factors**. As this coronavirus crisis tests the sector’s established business models, it also presents opportunities to build resilience and agility into the foundational structure of RCEES beginning with its first five-year strategic plan.



#### Political, Legal and Environmental Factors

On recording its first two cases of the novel coronavirus, the Ghana government imposed certain sweeping restrictions which affected the education sector among others. The passage of the Imposition of restrictions Act 2020 gave legal backing to the President’s directive as part of measures to contain the spread of the disease. UENR like other educational institutions across the country, closed down in adherence to the executive orders. RCEES by extension are not exempt.

The Centre will do well to comply with government directives: Thus, would continue to engage their local and international students, and other partners. RCEES should in consultation with University leadership, make efforts to complete scheduled work and endeavor to stay relevant using technology and other safe means during and beyond the period of restrictions.

As the country’s leadership turn attention to dealing with the scourge of the COVID-19, there may be a slowing down or shelving of actions required of government to facilitate administrative processes for the release of funding to RCEES. This situation may further be exacerbated as the World Bank has stated that it is focusing on acting swiftly to help developing countries strengthen their pandemic response and health care systems. In view of this, the Bank announced a rapid facility of a USD100 Million to the Ghana government.



RCEES and indeed UENR must be seen to be supporting government's fight against COVID. The University must take inventory of all resources (knowledge and material) that can be offered in tackling the universal contagion at the national or regional level. They can offer their expertise, research labs or other available resources and champion a solution they can be known for. The institution must create a niche and position itself as helping the country's pandemic response.

### **Economic Factors**

Economic outlook globally in the wake of the outbreak, is lackluster and economies may take a while to recover. Ghana's Finance Minister has projected a loss of revenue for the economy and year-end performance far below stated macro-economic targets. The closure of universities, reduced workforce inputs, restrictions on movement has had adverse impact on potential revenue to be generated by the UENR even though salaries for public service workers remain intact. These developments should however trigger some strategic actions outlined in the first Strategic Plan relating to the roll out of virtual, online and distance learning programmes. This could be part of efforts to introduce alternative sources of income for the Centre. In the short term, RCEES could use existing resources (i.e. faculty expertise, laptops, internet) to develop and deliver attractive in-demand online courses, workshops and training programmes to students, corporates and the general public locally and in the sub-region. In the medium-long term, the Centre can make the required investments into their IT infrastructure, IT systems and strategy that support the achievement of goals and ensure financial sustainability.

### **Socio – Cultural Factors**

Society being dynamic, is quickly adapting to the circumstances created by the emergence of the novel coronavirus. Society is finding innovative more resourceful ways of meeting its needs. RCEES must identify and meet the needs of its patrons and partners particularly in this era of the 'new normal'. RCEES can leverage on the uptake of virtual platforms for learning as well as the heightened interest in issues of environmental and energy sustainability to carry on engagement with their stakeholders to achieve set targets.

### **Technological Factors**

Information Communication Technologies previously thought of as 'nice-to-haves' for organisations in a developing country have become a business imperative with the advent of COVID-19. The use of video or tele-conferencing applications, online collaboration tools are gaining status as a work staple for many organisations and teams or groups. There will be the need to build capacity in teaching and engaging students remotely.

IT equipment and facilities need to be upgraded to handle the changing dynamics of the teaching and learning environment as well as emerging opportunities for research and expanded reach. There would also be the need for significant investment in RCEES' network infrastructure and associated cost would need to be considered. All these will have to be ungirded by an IT strategic plan and dovetailing into the overall strategic plan to ensure focus and sustainable impact.



RCEES

# SWOT ANALYSIS

## STRENGTHS

- Strong, trusted Leadership
- Funding from World Bank
- Qualified, committed staff and faculty
- Status as International Centre
- Cutting-edge postgraduate in Energy and Environmental Sustainability programmes
- Scholarships available and waivers for eligible students
- Part of global Collaborative Networks
- Name recognition
- Support from the University administration
- Government support in accreditation process
- Experienced international & industrial advisory board
- Multi-campus structure of university

## WEAKNESSES

- Current Infrastructure deficit to support envisaged teaching, learning, research goals
- Location
- Inadequate faculty
- Newness of the university
- Start-up status
- No female faculty
- Inadequate Professors

## OPPORTUNITIES

- Increasingly available funding from IGOs or Foundations for research in Energy and Environmental Sustainability
- Location (Regional Centre) in Ghana as an Africa Centre of Excellence
- World bank funding for State-of-the-art facility and built environment
- Alternate sources of energy
- Innovation in resource recovery
- Global focus on achieving SDGs
- Increased demand for human capital in area of Energy and Environmental Sustainability
- Influence of advisory boards for partnerships and funding
- Expand coverage or reach via online, virtual and distance learning programmes
- Creating custom training for local industries and employers.
- COVID-19 induced opportunities

## THREATS

- COVID-19 impact on sector & strategic plan implementation timelines
- World bank funds disbursement structure
- Change in UENR Administration
- Election year uncertainties
- Competition from new entrants as well as existing public institutions
- New Government policy to tighten controls and influence on universities
- Student's unrest
- Industrial action
- Reduced or depletion of funding from World bank or Government

### 3.3 - STRATEGIC GOALS, OBJECTIVES AND ACTIONS

Some background and details of the Strategic Goals, Objectives and Actions developed for RCEES are presented in this section with accompanying figures and table illustrations.



Figure 6 Strategic Goals of RCEES

#### **STRATEGIC GOAL 1**

##### **Maintain and enhance world-class teaching, research and scholarship.**

World-class institutions of higher learning are largely defined by the quality of their research output, their graduate and faculty footprints in industry/academia, scholarly works in top scientific journals, contribution to innovation and demonstrable impact and benefit to society.

With this goal RCEES would pursue research excellence, provide a conducive learning environment with state-of-the-art facilities and infrastructure, instrumental for conducting impact research with the necessary investments and support for faculty and students.

RCEES over the period should be recognised as a leading Centre for teaching, research and scholarship by demonstrating value and impact. This would be evidenced by the Centre's audacious pursuit of research funding and substantial investments and motivation for faculty research activities.

The Centre shall provide services and support faculty grant applications, publication in high-ranking journals, knowledge application, innovation and integration of research to enable active postgraduate learning. RCEES will also promote interdisciplinary research, international collaborations and develop reward programmes for exceptional achievement faculty research achievement.



Table 3.1 Strategic Goal 1 with Objectives and Actions

<b>STRATEGIC GOAL 1: MAINTAIN AND ENHANCE WORLD-CLASS TEACHING, RESEARCH AND SCHOLARSHIP.</b>	
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>
<b>1.1: Build and maintain world - class teaching and research in energy and environmental sustainability programmes.</b>	1.1.1: Develop and review curriculum
	1.1.2: Acquire international accreditation
	1.1.3: Participate in seminars and conferences
<b>1.2: Strengthen support and recognition for publication of scholarly articles in high impact journals.</b>	1.2.1: Publish articles in high impact journals
<b>1.3: Build the capacity of staff and faculty in teaching and research.</b>	1.3.1: Join global research networks.
<b>1.4: Conduct action and applied research.</b>	1.4.1: Co-design research projects with industry.
<b>1.5: Provide state-of-the-art teaching and research facilities.</b>	1.5.1: Establish well-resourced laboratories.
	1.5.2: Establish well-resourced libraries.
	1.5.3: Provide standard modern ICT facilities in classrooms.
	1.5.4: Provide internet enabled classrooms.
<b>1.6: Develop and maintain curriculum and programmes that integrate multiple modes of delivery.</b>	1.5.5: Provide a fully networked environment.
	1.6.1: Design and implement Online/Virtual learning programs.
	1.7.1: Arrange for Internships/Attachment for students.
	1.7.2: Conduct Field trips/Study tour for students.
<b>1.7: Prepare students to meet the demands and expectations of industry.</b>	1.7.3: Invite Guest lecturers from Industry to make presentations and interact with students on best-practices in industry.
	1.8.1: Conduct targeted Africa wide female students recruitment events.
	1.8.2: Send application invites to female students from continental Africa.
<b>1.8: Recruit Female students from the African Region.</b>	1.8.3: Evaluate and compile list of female students admitted from the Africa Region.



## STRATEGIC GOAL 2

### **Ensure the financial sustainability of RCEES.**

The effective and efficient management of RCEES' resources would undergird all efforts at reaching the Centre's mission and goals.

This goal is to essentially provide a strategic and integrated approach to efficiently managing RCEES resources and investments to ensure financial sustainability. RCEES' vision of becoming the leading internationally accredited Centre of Excellence that provides Quality Research and Postgraduate Education in Energy and Environmental Sustainability must be matched by a commitment to achieving long-term financial sustainability.

The implementation of the strategic plan should provide RCEES with the space and flexibility to grow revenues, reduce costs and develop resilience in periods of reduced external funds or deficient inflows. Over the course of the 5-year Strategic Plan, RCEES will proceed along the path of increasing revenue and from multiple streams while pursuing cost effectiveness strategies. RCEES will develop partnerships that would culminate in innovative programmes, increased corporate support and increased external support for indirect costs of research.

RCEES' commitment to financial sustainability underscores the need to build an effective budgeting model and robust financial management and administrative systems that would ensure retention of a greater percentage of revenue to run the Centre.

Table 3.2 Strategic Goal 2 with Objectives and Actions

<b>STRATEGIC GOAL 2: ENSURE FINANCIAL SUSTAINABILITY OF RCEES.</b>	
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>
<b>2.1: Ensure strict compliance with financial, legal, regulatory obligations; and Corporate Governance principles.</b>	2.1.1: Organise scheduled meeting with Centre's Advisory Boards and/ or Steering Committee to address matters of concern.
<b>2.2: Engage actively in Fundraising Campaigns.</b>	2.2.1: Develop and implement a comprehensive fundraising plan.
<b>2.3: Securing grants and donor funding.</b>	2.3.1: Develop an active database of funding agencies and prospective financiers.
	2.3.2: Prepare and submit Proposals.
	2.3.3: Develop capacity of faculty to secure grants.
	2.3.4: Collaborate with top-tier research centres and institutions to secure grants.
	2.3.5: Register with funding organisations and websites to monitor calls for grants and funding.

### STRATEGIC GOAL 3

#### **Recruit, nurture and retain a diverse staff and faculty that support RCEES' mandate.**

The Centre's contribution towards stimulating and promoting regional specialization, knowledge production, innovation of top-level faculty in specialized areas, are considered to provide the most favourable path to building and sustaining excellence in higher education particularly in STEM.

RCEES must recruit, nurture and retain staff, talented and diverse team of scientists and scholars in Energy, Environmental Sustainability and related areas. Specifically, Faculty, Administrative staff, unclassified professionals, post-doctoral fellows, Graduate Assistants, Research Assistants, Teaching Assistants and National Service Personnel.

The Centre should create a conducive environment that supports and retains a highly qualified, diverse faculty and staff and maintaining clear, transparent employee policies as well as equal opportunities for staff development, welfare and well-being.

RCEES will provide institutional support for current and new faculty in requisite tools, technology, lab resources, equipment, facilities and faculty research grants to support teaching and research performance and productivity. The Centre will also roll-out annual faculty and staff enrichment and professional development programmes focusing on strategic areas where increased capacity is most required.

In reviewing this goal from a diversity perspective, it was observed with particular reference to the dearth of female faculty at the Centre. RCEES must focus on attracting highly qualified female and international faculty to reflect the regional demography and nature of the Centre.

The Centre must create a conducive environment that intentionally includes female faculty and students in all scholarship undertakings. RCEES will as a matter of priority and policy subscribe to an affirmative action in enrollments and recruitment activities. The Centre must articulate policies to achieve a diverse workforce that strengthens its research and teaching. This would maintain the international outlook while developing a healthy working, learning and social environment in which staff and students are respected.

Table 3.3 Strategic Goal 3 with Objectives and Actions

<b>STRATEGIC GOAL 3: RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE.</b>	
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>
<b>3.1: Attract a gender balanced, and competent faculty and staff.</b>	3.1.1: Institute a Reward/Compensation schemes that are tied to the profitability of projects.
	3.1.2: Ensure facilities are managed to create a conducive working environment.
	3.1.3: Institute an Affirmative Action Policy in the hiring process.
<b>3.2: Attract and retain diverse, talented and highly qualified faculty and staff.</b>	3.2.1: Organise Periodic retreats and team building activities to strengthen working relationships and enhance productivity.



<b>STRATEGIC GOAL 3: RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE.</b>	
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>
<b>3.3: Develop mentorship opportunities and programmes to promote job satisfaction and succession planning.</b>	3.2.2: Conduct mid-year and annual performance review, as a basis for development plans.
	3.2.3: Organise Field/Study Trips to enrich the experiences of faculty and staff.
	3.2.4: Invite Guest lecturers from industry and institutions of global repute to make presentations, share best-practices, experiences and interact with faculty and staff.
	3.3.1: Assign junior faculty for mentorship by senior faculty.
	3.3.2: Promote Joint supervision and proposal writing between faculty members.
	3.3.3: Develop mentorship programmes for the Centre.
	3.3.4: Review mentorship programmes as part of periodic performance evaluation.



Figure 7. Some Members of RCEES Management and Staff

## STRATEGIC GOAL 4

### **Build and sustain strong partnerships with industry and other key stakeholders.**

Building and sustaining strong partnerships with industry and institutions is integral to RCEES' relevance in the Region, its research success and impact on society. The Africa Centres of Excellence (ACE) are expected to provide a wide-reaching positive impact for students and faculty, institutions, industries in the West and Central Africa regions and beyond.

As requirement of the ACEs, RCEES must also build and maintain enduring collaborations with key stakeholders including companies, government agencies, and research Centres for inputs into curricula, student/faculty workplace learning, consultancies, and joint research.

RCEES as part of its mandate must work with other Africa Centres of Excellence and partner institutions within and outside its network to share learning resources, curricula, best practices and training for faculty.

Table 3.4 Strategic Goal 4 with Objectives and Actions

<b>STRATEGIC GOAL 4: TO BUILD AND SUSTAIN STRONG PARTNERSHIPS WITH INDUSTRY AND INSTITUTIONS.</b>	
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>
<b>4.1: Create partnership with industry through training and industrial attachment for students and faculty.</b>	4.1.1: Develop and maintain an electronic database on stakeholders.
<b>4.2: Organise and participate in international energy and environmental sustainability programmes.</b>	4.2.1: Organise National energy and environmental sustainability competitions.



Figure 8. RCEES Partnership With Industry On Solar Energy





Figure 9. RCEES Industry Partners

## **SECTION 4 – PERFORMANCE MONITORING PLAN**

The success of any Strategic Plan is dependent largely on its Performance Monitoring Plan. A Results-based monitoring is a process that helps improve performance and achieve results. For effective results monitoring, a Performance Monitoring Plan (PMP) has been defined for RCEES.

The Performance Monitoring would involve periodic measuring of institutional progress toward explicit short, medium and long-term objectives. Feedback would then be provided on the results to decision makers who can use the information in several ways to improve performance. The Monitoring Plan included in this Strategic Plan is designed to enable the Centre to collect data at frequent intervals over the Plan period. Additionally, it would help RCEES manage the process of monitoring, collecting, analyzing and reporting progress toward achieving the strategic objectives of the Plan.

The goal is to ensure an effective and efficient implementation of Strategic Actions; and improve management of outputs, outcomes and impacts which are directly generated by specific activities of a strategic plan. Thus, it would provide a framework for regular management review of the Strategic Plan and serves as a guide to decision-making. This would ensure that the results monitoring of RCEES follows the direction established during strategic planning.

The **Performance Monitoring Plan** includes: **Strategic Goals, Objectives, Actions, Key Performance Indicators (KPIs), Responsibility and Timelines** over five (5) years. RCEES Management should determine progress or lack thereof by measuring the extent to which key performance indicators of specific activities (strategic objectives) have been achieved on a monthly basis consistent with other month-end management reviews. A short report or presentation that tables progress made, can be presented to Management or the Governing Council to facilitate the process.

The core metrics, qualitative and quantitative indicators are used to assess progress on the Strategic Goals, Objectives and Initiatives. These parameters would provide managers with feedback to make appropriate and informed decisions in adjusting the design or implementation arrangements of the Strategic Plan. Therefore, the Monitoring Plan would be vital in achieving the intended Strategic Goals the long-term success and changes which are envisaged for RCEES.



In developing the Performance Monitoring Framework, we adopted a pragmatic approach by using existing sources of data and information.

The key components of the **Performance Monitoring Framework** includes:

- Focus on Centre-wide matrices for quantitative and qualitative Indicators on the Strategic Objectives.
- Multiple Indicators for each Strategic Objective, given the complexity of this assessment, but as few as possible to enhance focus.
- Information to track the progress, based on performance, cost and time schedule.
- Flexible and adaptable matrices that could be useful for RCEES and UENR.
- The need to minimize the amount of staff time or additional staff to implement the matrices.
- Use existing sources of data and information where applicable.

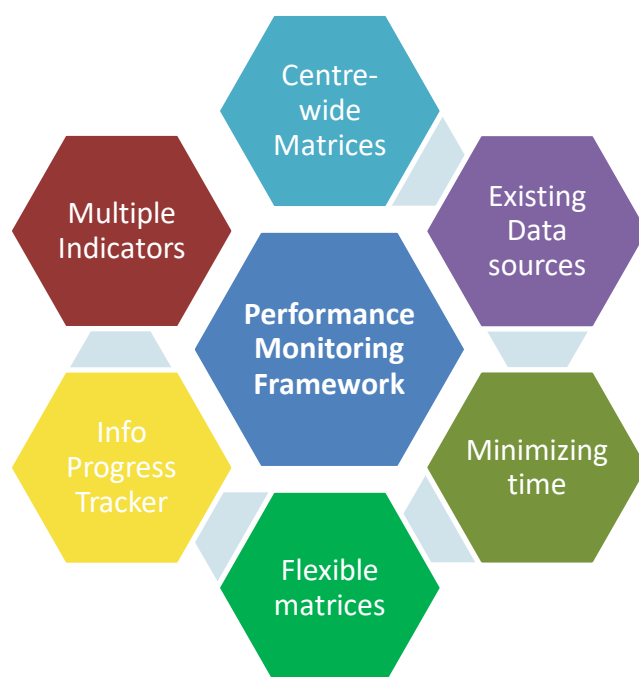


Figure 10. Performance Monitoring Framework Components

On the following pages, we have provided a Performance Monitoring Plan for RCEES over the next five (5) years:

Table 4.1 Goal 1 Performance Monitoring Plan with KPIs, Responsibilities and Timelines

<b>STRATEGIC GOAL 1: MAINTAIN AND ENHANCE WORLD-CLASS TEACHING, RESEARCH AND SCHOLARSHIP</b>				
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>	<b>KEY PERFORMANCE INDICATORS (KPIs)</b>	<b>RESPONSIBILITY</b>	<b>TIMELINES</b>
<b>1.1: Build and maintain world - class teaching and research in energy and environmental sustainability programmes.</b>	1.1.1: Develop and review curriculum.	Number of curricula developed	Academic Coordinator	2020; 2022; and 2024
		Number of curricula reviewed		
	1.1.2: Acquire international accreditation.	Number of international accreditations sought	Director	2022
	1.1.3: Participate in seminars and conferences.	Number of faculty and staff attending conferences	Director	2020 - 2024
<b>1.2: Strengthen support and recognition for publication of scholarly articles in high impact journals.</b>	1.2.1: Publish articles in high impact journals.	Number of articles published in high impact journals	Research Coordinator	2020 - 2024
<b>1.3: Build the capacity of staff and faculty in teaching and research.</b>	1.3.1: Join global research networks.	Number of faculty in international research networks	Research Coordinator	2020 - 2024
<b>1.4: Conduct action and applied research.</b>	1.4.1: Co-design research projects with industry.	Number of projects co-designed with industry	Research Coordinator	2020 - 2024
<b>1.5: Provide state-of-the-art teaching and research facilities.</b>	1.5.1: Establish well-resourced laboratories.	Number of laboratories established	Director	2021
	1.5.2: Establish well-resourced libraries.	Number of libraries established		
	1.5.3: Provide standard modern ICT facilities in classrooms.	Number of classrooms with ICT facilities		
	1.5.4: Provide internet enabled classrooms.	Number of internet enabled classrooms		





<b>STRATEGIC GOAL 1: MAINTAIN AND ENHANCE WORLD-CLASS TEACHING, RESEARCH AND SCHOLARSHIP</b>				
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>	<b>KEY PERFORMANCE INDICATORS (KPIs)</b>	<b>RESPONSIBILITY</b>	<b>TIMELINES</b>
	1.5.5: Provide a fully networked environment.	Number of rooms networked		
<b>1.6: Develop and maintain curriculum and programmes that integrates multiple modes of delivery.</b>	1.6.1: Design and implement Online/Virtual learning programs.	Number of online/virtual learning programmes	Academic Coordinator	2022
<b>1.7: Prepare students to meet the demands and expectations of industry.</b>	1.7.1: Arrange for Internships/Attachment for students.	Number of students on internship/attachment programs	Partnership Coordinator	2020 - 2024
	1.7.2: Conduct Field trips/Study tour for students.	Number of field trips/study tour conducted for students		
	1.7.3: Invite Guest lecturers from Industry to make presentations and interact with students on best-practices in industry.	Number of lectures organised		
<b>1.8: Recruit Female students from the African Region</b>	1.8.1: Conduct targeted Africa wide female students recruitment events.	Number of targeted recruitment events	Academic Coordinator	2020 - 2024
	1.8.2: Send application invites to female students from continental Africa.	Number of application invites sent to African female students		
	1.8.3: Evaluate and compile list of female students admitted from the Africa Region.	Number of female students admitted from Africa		



Table 4.2 Goal 2 Performance Monitoring Plan with KPIs, Responsibilities and Timelines

<b>STRATEGIC GOAL 2: ENSURE THE FINANCIAL SUSTAINABILITY OF RCEES</b>				
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>	<b>KEY PERFORMANCE INDICATORS (KPIs)</b>	<b>RESPONSIBILITY</b>	<b>TIMELINES</b>
<b>2.1: Ensure strict compliance with financial, legal, regulatory obligations; and Corporate Governance principles.</b>	2.1.1: Organise scheduled meeting with the Governing Council to address matters of concern.	Number of meetings attended	Director	2020 - 2024
<b>2.2: Engage actively in Fundraising Campaigns.</b>	2.2.1: Develop and implement a comprehensive fundraising plan.	Number of fundraising plans implemented	Director	2020 - 2024
<b>2.3: Securing grants and donor funding.</b>	2.3.1: Develop an active database of funding agencies and prospective financiers.	Number of funding agencies in database	Director	2020
	2.3.2: Prepare and submit Proposals.	Number of Proposals submitted	Research Coordinator	2020 - 2024
	2.3.3: Develop capacity of faculty to secure grants.	Number of faculty trained	Director	2020 - 2024
	2.3.4: Collaborate with top-tier research centres and institutions to secure grants.	Number of grants secured through collaborations	Research Coordinator	2020 - 2024
	2.3.5: Register with funding organisations and websites to monitor calls for grants and funding.	Number of registrations completed	Research Coordinator	2020 - 2024



Table 4.3 Goal 3 Performance Monitoring Plan with KPIs, Responsibilities and Timelines

<b>STRATEGIC GOAL 3: RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE</b>				
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>	<b>KEY PERFORMANCE INDICATORS (KPIs)</b>	<b>RESPONSIBILITY</b>	<b>TIMELINES</b>
<b>3.1: Attract a gender balanced, and competent faculty and staff.</b>	3.1.1: Institute a Reward/Compensation schemes that are tied to the profitability of projects.	Percentage of project profit to faculty and staff	Director	2020
	3.1.2: Ensure facilities are managed to create a conducive working environment.	Number of janitorial staff	Director	2020 - 2024
	3.1.3: Institute an Affirmative Action Policy in the hiring process.	Number of female faculty and staff	Director	2020
<b>3.2: Attract and retain diverse, talented and highly qualified faculty and staff.</b>	3.2.1: Organise Periodic retreats and team building activities to strengthen working relationships and enhance productivity.	Number of retreats organised	Director	2020 - 2024
	3.2.2: Conduct mid-year and annual performance review, as a basis for development plans.	Number of reviews conducted	Director	2020 - 2024
	3.2.3: Organise Field/Study Trips to enrich the experiences of faculty and staff.	Number of trips	Partnership Coordinator	2020 - 2024
	3.2.4: Invite Guest lecturers from industry and world class institutions to make presentations and interact with faculty and staff on best-practices in industry.	Number of industry related lectures organized	Partnership Coordinator	2020 - 2024
	3.3.1: Assign junior faculty for mentorship by senior faculty.	Number of mentorships assigned	Director	2020 - 2024



STRATEGIC GOAL 3: RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE				
STRATEGIC OBJECTIVES	STRATEGIC ACTIONS	KEY PERFORMANCE INDICATORS (KPIs)	RESPONSIBILITY	TIMELINES
<b>3.3: Develop mentorship opportunities and programmes to promote job satisfaction and succession planning.</b>	3.3.2: Promote Joint supervision and proposal writing between faculty members.	Number joint proposals written	Director	2020 - 2024
	3.3.3: Develop mentorship programmes for the Centre.	Number of mentorships programmes developed	Director	2020 - 2024
	3.3.4: Review mentorship programmes as part of periodic performance evaluation.	Number of mentorships reviewed	Director	2020 - 2024



Figure 11. RCEES Is Attracting and Retaining the Best

Table 4.4 Goal 4 Performance Monitoring Plan with KPIs, Responsibilities and Timelines

<b>STRATEGIC GOAL 4: TO BUILD AND SUSTAIN STRONG PARTNERSHIPS WITH INDUSTRY AND INSTITUTIONS</b>				
<b>STRATEGIC OBJECTIVES</b>	<b>STRATEGIC ACTIONS</b>	<b>KEY PERFORMANCE INDICATORS (KPIs)</b>	<b>RESPONSIBILITY</b>	<b>TIMELINES</b>
<b>4.1: Create partnership with industry through training and industrial attachment for students and faculty.</b>	4.1.1: Develop and maintain an electronic database on stakeholders.	Number database	Director	2020
<b>4.2: Organise and participate in international energy and environmental sustainability programmes.</b>	4.2.1: Organise National energy and environmental sustainability competitions.	Number of national competitions organized annually	Partnership Coordinator	2020 - 2024



Figure 12. RCEES' Institutional and Academic Partners



## SECTION 5 – FINANCIAL IMPLICATIONS

### 5.1 - BUDGET, PROJECTED REVENUE AND EXPENDITURE OF RCEES: 2020 - 2024

The Financial Plan for RCEES, outlines the Centre's Budget and Projected Revenue and Expenditure over the Period 2020 – 2024. The Projected Revenue and Expenditure for the First Year of the Project, contained in the Draft Implementation Plan of June 2020; and some assumptions were made, as the basis for forecasted figures over the next four (4) years. The Plan was developed with data and information that would make RCEES a self-financing Centre.

On the following pages, the Budget, Projected Revenue and Expenditure from 2020 – 2024 are presented.

Table 5. 1: Budget of the RCEES for 2020 – 2024

Expenditure Category	Estimated Costs in (US\$)						
Budget by Line Item	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total	% of total
Equipment	32,000	440,000	200,000	-	-	672,000	10.50
Infrastructure	300,000	1,300,000	-	-	-	1,600,000	25.00
Centre Management and Enhancement	170,100	112,800	212,800	162,800	162,800	821,300	12.80
Meeting	101,000	102,400	102,400	102,400	102,400	510,600	8.00
Teaching, Research and Training	246,900	919,900	743,400	443,400	443,400	2,797,000	43.70
Total	852,019	2,877,120	1,260,621	710,622	710,623	6,400,900	100.00



Table 5. 2 Projected Revenue and Expenditure for 2020 - 2024

Projected Revenue	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Readiness	850,000	765,000	803,250	843,413	885,583
Quantity of students	399,000	359,100	377,055	395,908	415,703
Quality of Education	1,050,000	945,000	992,250	1,041,863	1,093,956
Relevance of Education & Research	367,500	330,750	347,288	364,652	382,884
Fiduciary Enhancement	60,000	54,000	56,700	59,535	62,512
Institutional Impact	350,000	315,000	330,750	347,288	364,652
Total Projected Revenue	3,076,500	2,768,850	2,907,293	3,052,657	3,205,290
Projected Expenditure	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Readiness	44,000	44,000	46,200	48,510	50,936
Quantity of students	206,900	206,900	217,245	228,107	239,513
Quality of Education and Research	523,076	523,076	549,230	576,691	605,526
Centre Management	124,024	124,024	130,225	136,736	143,573
Total Expexted Expenditure	898,000	898,000	942,900	990,045	1,039,547
Excess Projected Revenue over Expenditure	2,178,500	1,870,850	1,964,393	2,062,612	2,165,743

#### Assumptions

Year 2 Projected Revenues would decrease by 10%

Year 2 Projected Expenditure would not change

Yr 3 - 5 Projected Revenue and Expenditure would increase 5% yearly

## 5.2 - BUDGET FOR THE STRATEGIC PLAN OF RCEES: 2020 - 2024

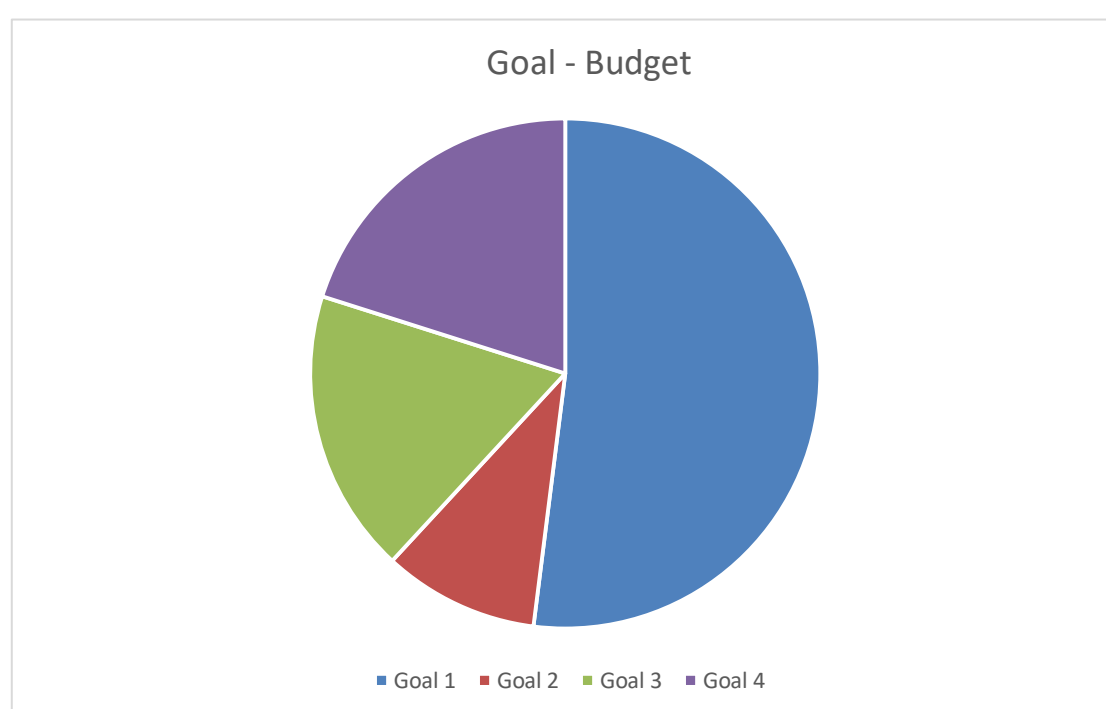
We have provided a **Budget – estimated financial requirement** of the Strategic Plan for RCEES. The financial requirements provided should be covered by the Budget of RCEES. It is envisaged that some estimated costs would be administrative in nature and may not be substantial. However, funding for Capital Projects, Information, Communications and Technology Infrastructure, Management Information Systems, and engagement of Consultants may be substantial. Therefore, it is crucial that planned activities in the Strategic Plan are executed within the budgetary framework.

In executing the Budget for the Strategic Plan, the overall process must be structured around Strategic Goals in phases, with preference for implementation in priority actions. This would ensure an equitable balance of resource in all phases and a judicious sourcing and using of funds.



The Budget for the Strategic Plan of RCEES is shown below, at the level of Strategic Goals:

<b>GOAL 1 - MAINTAIN AND ENHANCE WORLD-CLASS TEACHING, RESEARCH AND SCHOLARSHIP</b>	<b>1,500,000</b>
<b>GOAL 2 - ENSURE THE FINANCIAL SUSTAINABILITY OF RCEES</b>	<b>285,000</b>
<b>GOAL 3 - RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE</b>	<b>520,000</b>
<b>GOAL 4 - TO BUILD AND SUSTAIN STRONG PARTNERSHIPS WITH INDUSTRY AND INSTITUTIONS</b>	<b>580,000</b>
<b>TOTAL COST</b>	<b>2,885,000</b>



The Tables below outlines the financial requirements for respective Actions in the Strategic Plan for RCEES over the next five (5) years.

Table 5.3 Expenditure Details of RCEES Strategic Actions

<b>GOAL 1 - MAINTAIN AND ENHANCE WORLD-CLASS TEACHING, RESEARCH AND SCHOLARSHIP</b>	<b>Yr 1 - 2020</b>	<b>Yr 2 - 2021</b>	<b>Yr 3 - 2022</b>	<b>Yr 4 - 2023</b>	<b>Yr 5 - 2024</b>	<b>Est. Cost \$</b>
<b>1.1: Build and maintain world - class teaching and research in energy and environmental sustainability programmes.</b>						
1.1.1: Develop and review curriculum						30,000
1.1.2: Acquire international accreditation						15,000
1.1.3: Participate in seminars and conferences						55,000
<b>1.2: Strengthen support and recognition for publication of scholarly articles in high impact journals</b>						
1.2.1: Publish articles in high impact journals						150,000
<b>1.3: Build the capacity of staff and faculty in teaching and research</b>						
1.3.1: Join global research networks.						100,000
<b>1.4: Conduct action and applied research.</b>						
1.4.1: Co-design research projects with industry.						50,000
<b>1.5: Provide state-of-the-art teaching and research facilities.</b>						
1.5.1: Establish well-resourced laboratories.						125,000
1.5.2: Establish well-resourced libraries.						125,000
1.5.3: Provide smart ICT facilities in classrooms.						125,000
1.5.4: Provide smart (ICT-enabled) classrooms.						100,000
1.5.5: Provide a fully networked environment.						125,000
<b>1.6: Develop and maintain curriculum and programmes that integrates multiple modes of delivery.</b>						
1.6.1: Design and implement Online/Virtual learning programs.						250,000
<b>1.7: Prepare students to meet the demands and expectations of industry.</b>						
1.7.1: Arrange for Internships/Attachment for students.						50,000
1.7.2: Conduct Field trips/Study tour for students.						50,000
1.7.3: Invite Guest lecturers from Industry to make presentations at						50,000
<b>1.8: Recruit Female students from the African Region.</b>						
1.8.1: Conduct targeted Africa wide female students						30,000
1.8.2: Send application invites to female students from						30,000
1.8.3: Evaluate and compile list of female students						40,000
<b>Total Cost</b>						<b>1,500,000</b>

<b>GOAL 2 - ENSURE THE FINANCIAL SUSTAINABILITY OF RCEES</b>	<b>Yr 1 - 2020</b>	<b>Yr 2 - 2021</b>	<b>Yr 3 - 2022</b>	<b>Yr 4 - 2023</b>	<b>Yr 5 - 2024</b>	<b>Est. Cost \$</b>
<b>regulatory obligations; and Corporate Governance principles.</b>						
2.1.1: Organise scheduled meeting with the Governing Council						75,000
<b>2.2: Engage actively in Fundraising Campaigns.</b>						
2.2.1: Develop and implement a comprehensive fundraising p						60,000
<b>2.3: Securing grants and donor funding.</b>						
2.3.1: Develop an active database of funding agencies						30,000
2.3.2: Prepare and submit Proposals.						30,000
2.3.3: Develop capacity of faculty to secure grants.						30,000
2.3.4: Collaborate with top-tier research centres and						30,000
2.3.5: Register with funding organisations and websites						30,000
<b>Total Cost</b>						<b>285,000</b>





<b>GOAL 3 - RECRUIT, NURTURE AND RETAIN A DIVERSE STAFF AND FACULTY THAT SUPPORT RCEES' MANDATE</b>	<b>Yr 1 - 2020</b>	<b>Yr 2 - 2021</b>	<b>Yr 3 - 2022</b>	<b>Yr 4 - 2023</b>	<b>Yr 5 - 2024</b>	<b>Est. Cost \$</b>
<b>3.1: Provide conditions of service that attract a gender balanced, diverse and qualified faculty and staff.</b>						
3.1.1: Institute a Reward/Compensation schemes that are tied to the						20,000
3.1.2: Ensure facilities are managed to create a conducive working						80,000
3.1.3: Institute an Affirmative Action Policy in the hiring process.						20,000
<b>3.2: Provide conditions of service to attract and retain diverse, talented and highly qualified faculty and staff.</b>						
3.2.1: Organise Periodic retreats and team building activities to						62,500
3.2.2: Conduct mid-year and annual performance review, as a basis						62,500
3.2.3: Organise Field/Study Trips to enrich the experiences of						62,500
3.2.4: Invite Guest lecturers from industry to make presentations and						62,500
<b>3.3: Develop mentorship opportunities and programmes to promote job satisfaction and succession planning.</b>						
3.3.1: Assign junior faculty for mentorship by senior faculty.						37,500
3.3.2: Promote Joint supervision and proposal writing between						37,500
3.3.3: Develop mentorship programmes for the Centre.						37,500
3.3.4: Review mentorship programmes as part of periodic						37,500
<b>Total Cost</b>						<b>520,000</b>

<b>GOAL 4 - TO BUILD AND SUSTAIN STRONG PARTNERSHIPS WITH INDUSTRY AND</b>	<b>Yr 1 - 2020</b>	<b>Yr 2 - 2021</b>	<b>Yr 3 - 2022</b>	<b>Yr 4 - 2023</b>	<b>Yr 5 - 2024</b>	<b>Est. Cost \$</b>
<b>4.1: Create partnership with industry through training and industrial attachment for students and faculty.</b>						
4.1.1: Develop and maintain an electronic database on stakeholders.						80,000
<b>4.2: Organise and participate in international energy and environmental sustainability programmes.</b>						
4.2.1: Organise National energy and environmental sustainability com						500,000
<b>Total Cost</b>						<b>580,000</b>



Figure 12. Architectural Drawing of Proposed RCEES Facility (Night Time Front View)