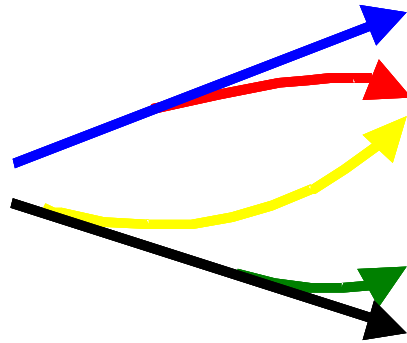


KITE



2003 Annual Report



Energy and Technology for a Poverty-free Ghana and Africa

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Chairman's Statement

The year 2003 was full of activity for KITE. The implementation of KITE's Strategic Plan for the period 2002-2007 started in this year. The 2003 Annual Report is modelled on a new format to make it a more informative and policy-oriented document, in line with the organisation's mission statement and thematic areas. We in KITE acknowledge the need to move beyond the project-based approach, which had characterized our first five (5) to six (6) years of existence, to a more programmatic engagement with practitioners and policy makers alike as we grow into a mature global player in the energy and technology development arena.

As we roll out our Strategic Plan which provides a roadmap for the realization of KITE's new vision of becoming a best-practice organisation committed to a poverty-free Ghana and Africa, we recognize that we shall require a deepening of our human and financial resources. We estimate, for instance, that our annual turnover would need to grow about five-fold from its current level of US\$ 230,000 to over US\$ 1 million by the end of the 5-year plan period. We have come a long way from an annual turnover of a little over US\$ 4,000 in 1997 and hence we have every confidence that with the continuous support of our partners we shall continue to rise to even greater heights as we strive together to change the face of this earth for the better.

I take this opportunity, on behalf of KITE's Executive Council and on my own personal behalf, to salute the hard working and innovative staff of KITE for keeping our kite flying higher and higher!

Siapha Kamara

KITE's Board and Personnel

Members

1. Ms. Theresa Osei-Tutu
2. Dr. Jerome Antonio
3. Prof. Abeeku Brew-Hammond
4. Dr. Dotse Tsikata

Executive Council

- | | |
|--------------------------|---------------|
| 1. Mr. Siapha Kamara | Chairman |
| 2. Dr. Jerome Antonio | Vice Chairman |
| 3. Ms. Theresa Osei-Tutu | Member |

Staff

- | | |
|-------------|---|
| 1. Director | - Abeeku Brew-Hammond, DPhil
(Science and Technology Policy) |
|-------------|---|

Accra Office

- | | |
|-------------------------------|--|
| 2. Senior Projects Manager | - Harriette Amissah-Arthur, MBA
(Finance) |
| 3. Projects Officer | - Nana Adwoa Atta-Konadu, MA
(Public Policy) |
| 4. Assistant Projects Officer | - Samson Atubga, BSc (Mechanical
Engineering) |
| 5. Assistant Projects Officer | - Frank Atta-Owusu Otabil BCom.
(Commerce) |
| 6. Administrative Assistant | - Isabella Asimadi, HND
(Secretaryship) |
| 7. Logistics Assistant | - Samuel Afari, HND (Marketing) |

Kumasi Office

- | | |
|-------------------------------|--|
| 8. Senior Project Officer | - Ishmael Edjekumhene, MSc
(Econs.) Public Policy |
| 9. Assistant Projects Officer | - Akosua Baah-Kwarteng, BSc
(Development Planning) |
| 10. Assistant Project Officer | - Solomon Quansah, BSc
(Mechanical Engineering) |
| 11. Administrative Officer | - Victoria Lyubytska-Hewlett, MSc.
(Electro-Mechanical Engineering) |
| 12. Logistics Assistant | - Charles Reindorf (GCE 'A' Level) |

1. Strategic Plan 2002-2007

KITE burst onto the NGO scene in Ghana some seven years ago and has achieved significant impact and growth within this period. Nevertheless, KITE recognizes that as a young organisation it needs to consolidate its track record of excellence in project execution, transparency, prudent financial management and administrative efficiency in order to cultivate and sustain a high level of confidence among its partners both locally and internationally. Aiming to build upon its achievements and to maintain a path towards systematic growth and development within the organization, KITE initiated a strategic planning process in the second half of 2002.

The aim of the strategic planning process was to take stock of KITE's achievements and experiences in order to chart a future course that will be guided by both its strengths and weaknesses, as well as the opportunities and threats present in its operating environment. The strategic planning process culminated in the formulation of a Strategic Plan document to guide KITE's operations over the five-year period from 2002-2007.

KITE's Strategic Plan 2002-2007 incorporates an evolved version of the original corporate principles, updated to reflect current thinking as well as position KITE to take advantage of current global and national research opportunities in a manner that benefits the deprived in society. The Plan also clearly defines and categorizes KITE's operations over the plan period into 3 main thematic areas, namely:

- Energy, Gender and Poverty (EGP)
- New and Emerging Technologies (NET)
- Knowledge Absorption and Diffusion (KAD)

Each of the thematic areas will involve one or two programs; a mix of current programs and others to be developed within the plan period. An example being the Energy, Gender and Poverty thematic area which encompasses two existing programs: Clean Energy Enterprise Development and Productive Uses of Energy in Rural Areas. In addition to the thematic areas, the plan also makes provision for KITE to undertake consultancies in several core competence areas which may be summarised as follows:

- Clean/Renewable Energy Technology Policy
- Power Sector Reform and Public Benefits
- Clean Development Mechanism (CDM)

2. Energy, Gender and Poverty (EGP)

2.1 Clean Energy Enterprise Development

The main activity under this programme area is the African Rural Energy Enterprise Development (AREED) project which KITE has been implementing since 2000. AREED seeks to develop new sustainable energy enterprises that use cleaner, efficient and renewable energy technologies to meet the energy needs of under-served populations, thereby reducing the environmental and health consequences of existing energy use patterns. The AREED approach offers rural energy entrepreneurs a combination of enterprise development services and start-up financing. This integrated financial and technical support allows entrepreneurs to plan and structure their companies in a manner that prepares them for growth and makes eventual investments by mainstream financial partners less risky.

African Rural Energy Enterprise Development (AREED)

Inadequacies of the regulatory environment in the LP Gas industry especially with respect to safety, lead to a negative perception of this sector amongst mainstream financial institutions and Oil Marketing Companies leading to reluctance to invest in this sector.

AREED's work with the private sector through its entrepreneurs offers opportunities for enabling the entrepreneurs to directly communicate with policy makers using different kinds of mechanisms and fora.

The year 2003 saw an appreciable increase in the number of enquiries received by KITE from prospective entrepreneurs. A total of 90 enquiries were made by entrepreneurs; 43 entrepreneurs went ahead to submit proposals and were invited to participate in two (2) entrepreneurs' training workshops organized during the year under review. Investment proposals for two enterprises – Translegacy (LP Gas stove fabrication) and M38 Ventures (LP Gas sales and distribution) – were presented to the AREED Investment Committee in 2003 and both were approved for loan amounts of \$20,000 and \$59,000 respectively.



Figure 1: AREED Enterprises for 2003

Women's Energy Enterprise Development (WEED) Project

The Women's Energy Enterprise Development (WEED) project was sponsored by the World Bank/Energy Sector Management Assistance Programme (ESMAP). The project was designed to test a business model for empowering women through income generation in energy service delivery. The model involves capacity building among rural women and micro-enterprise development for modern energy service delivery to their communities.

KITE undertook surveys in a total of eight communities; four each in the Central and Northern regions to identify the business prospects and test the feasibility of the project concept and activities for implementation in rural communities. This included: (i) electronic lamp assembly facilities and (ii) The provision of an energy source in the form of a diesel engine for electronic lamp assembling as well as other productive activities (e.g. corn-milling or water- pumping) in a way that improves the load factor for the engine. In addition, KITE successfully completed and duly submitted a business plan for a DC lamp assembling facility in Tolon in the Northern region of Ghana to the World Bank for consideration.



Figure 2: AREED Project Officers, one-on-one with an entrepreneur

2.2 Productive Uses of Energy in Rural Areas

KITE's main activity under this program area is the development of a Multifunctional Platform (MFP) program for Ghana. Other activities include LPG Rural Energy Challenge and Global Village Energy Partnership, GVEP, presented in subsequent sections of this report.

The MFP is a source of mechanical and electrical energy, provided by an 8 to 12hp diesel engine and mounted on a chassis and connected to a variety of end use equipment such as grinding mills, battery chargers, water pumps, vegetable oil presses, welding etc. machines, carpentry tools, generators and mini electricity grids configured to suit the needs of the individual communities they serve.]

The MFP program in Ghana aims at promoting productive uses of energy through the sustainable deployment of Multifunctional Platforms (MFPs) as an integrated energy system in rural and peri-urban communities.

KITE led a nationwide effort to develop an MFP programme document during the first quarter of 2003 with funding support from the Shell Foundation. A national stakeholders' workshop was held in February as part of extensive consultations required for the development of the program. The coordinator of the UNDP MFP Regional Program, Laurent Coche, visited Ghana from April 26th to May 2nd as a guest of KITE to consult with government and the UNDP country office on the way forward. The preparation of the MFP program document paved the way for the inclusion of Ghana in the UNDP Regional MFP Program.



Figure 3: Ghana's First MFP in operation

The first MFP training program in Ghana sponsored by UNDP and EDF of France (acting through Afrique Initiatives) took place at the Mechanical Engineering Department of KNUST from October 8 – 18, 2003. Mr. Lionel Ferrari, a Malian-based UNDP MFP Trainer for francophone West Africa was the resource person.

The main output of the training workshop was the establishment of Ghana's maiden MFP enterprise at Yaakrom, an un-electrified rural community in the Dormaa District of the Brong-Ahafo region. The selection of the community was based on the presence of some economic activities, electrification status, and more importantly, the presence of a woman entrepreneur.

The LPG Rural Energy Challenge

The UNDP - World LP Gas Association (WLPGA) Rural Energy Challenge is a Type II initiative that was born out of some of the key recommendations made at the World Summit on Sustainable Development (WSSD) in Johannesburg. The WLPGA-UNDP LP Gas Rural Energy Challenge was launched in Accra, Ghana in August, 2003. Based on KITE's involvement in the LPG industry through AREED and its keen support for the initiative, KITE was commissioned to prepare the background document as well as rapporteuring for the workshop. The workshop brought together a total of fifty three (53) participants, drawn

from the public and private sectors, NGOs, international development and donor agencies

KITE is also a member of the UNDP's National LP Gas Planning committee that was set up to facilitate the roll out of WLPGA-UNDP LP Gas Rural Energy Challenge activities in Ghana.[comment same as on the WEED project]



Figure 4: LPG Stakeholders at the Workshop

Global Village Energy Partnership (GVEP)

GVEP was launched in August 2002 at the World Summit on Sustainable Development in Johannesburg as another "Type II" partnership. As one of the key supporters of GVEP, Prof. Abeeku Brew-Hammond, the Director of KITE was present at the event. GVEP seeks to accelerate the pace and the scope of energy activities in a more coordinated fashion to facilitate the improvement of access to energy services for an additional 400 million people living in rural areas around the world by 2015. Ghana signed on as a GVEP partner in October 2002 at the GVEP Ministerial meeting in Addis Ababa, Ethiopia. Since August 2002, KITE has championed GVEP activities in Ghana.

In August 2003, a GVEP stakeholders' workshop was organised at Akosombo, Ghana, with sponsorship from the National Renewable Energy Laboratory (NREL) of the United States. A total of 21 delegates drawn mostly from Ministries, Departments and Agencies (MDAs) and NGOs participated in the workshop. The workshop report prepared by KITE was circulated to GVEP partners.

KITE also submitted a proposal to the GVEP secretariat to engage in a series of stakeholder consultations in the ensuing year. Initial feedback indicates that the proposal has been accepted for funding. If funding is released on time, the GVEP Action Plan for Ghana will be completed in 2005.



Figure 5: Stakeholders at the GVEP Workshop

3. New and Emerging Technologies (NET)

Information and Communication Technologies (ICTs)

In this era of globalisation and the rapid expansion of trans-national markets for telecom and other electronic services, ICTs have become part of the key infrastructure driving social and economic development. They have not only altered the way people live, work, communicate and entertain themselves, but have also created a new infrastructure for business, scientific advancement and social interaction. ICTs have continued to propel the proliferation of new media and globalisation of businesses. It also has increased public participation in national and global affairs. At the same time however, ICTs are bringing forth new issues that transcend national boundaries, such as the "digital divide" among regions, nations and communities. Consequently, Ghana, like many other countries is making efforts to develop its ICTs sector.



Figure 6: A customer on his way to charging his 12 V battery at a solar powered communication centre

During the year under review, KITE was involved in two ICT related projects;

- Strengthening of ICTs Policies in Africa: Governance and Equity Issues – the Case of Ghana; funded by the African Technology Policy Studies network (ATPS)
- The UNEP-sponsored ICT Applications of Renewable Energy for Sustainable Development (IRESD) project.

The objectives of the ATPS-ICT Governance regional project are to examine the existing ICT policies and regulations for the deployment of ICTs in Ghana, assess the capacity of the existing institutional and regulatory framework and examine the implementation of the universal access/service policy and find out the role of the National Communications Authority (NCA).

The ATPS-ICT study led to a number of interesting findings, notably among them, the finding that the establishment of a strong and effective regulatory regime is a necessary precondition for the successful deployment and development of ICTs in Ghana. The study found inter-alia that a strong and effective regulatory authority would be able to balance the interests of the various stakeholders in the ICT sector, including operators, consumers and political interests in such a way as to ward-off direct political control and ensure fairness.

The IRESA project on the other hand sought to catalyse the diffusion of ICT applications in rural areas, by helping to expand opportunities available for rural people to meet their needs in a sustainable manner.

4. Research activities in Core Competencies

4.1 Power Sector Reform

During the period under review, KITE participated in three power/energy sector reform research projects. They were:

- The Expanded Provision of Public Benefits as Power Sectors in Developing Countries are reformed (commenced in 2002 but was completed in 2003).
- Energy Use, Energy Supply, Sector Reforms and the Poor (EESP, commenced in 2003)
- Poverty and Social Impact Analysis of Electricity Tariff Reform, PSIA (commenced in 2003 and is expected to be completed in 2004). The EESP and PSIA projects are both funded by the World Bank.

Research findings from “The Expanded Provision of Public Benefits as Power Sectors in Developing Countries are Reformed” suggest that power sector reform presents opportunities relating to the various markets in which renewables can participate, that new players and new funding sources are introduced under reforms, and the fact that new regulatory frameworks could be instituted in favour of renewables. However the opportunities are likely to remain unexploited unless new as well as existing power sector operatives are either obliged to or enticed through appropriate regulatory mechanisms to do so.

Experiences reviewed as part of KITE’s research activities have shown that these mechanisms are best introduced during the formulation of the reforms, otherwise rules governing reformed power sectors and markets could lock in conventional technologies missing, yet again, an opportunity for the inclusion of clean energy sources, especially renewables.

Specific recommendations made included the following;

- Enactment of stable framework for independent power producers under competition
- Creating a level playing field for renewables through reform
- Regulation of distribution utilities to encourage distributed generation
- Imposition of obligations to buy and sell
- Devising appropriate financing mechanisms.

These findings confirm that Ghana's attempt to introduce the Embedded Generation Facility (EGF) for renewables is an example of best practice regulation that should be implemented fully. The PURC should therefore be adequately resourced to design the guidelines and rules of operation.

The EESP and PSIA projects were started late 2003, The objectives of the EESP is to identify patterns of energy use of poor households in various situations and find out the patterns of the supply of energy to these poor households. It is also to establish links between the supply and use of energy by poor households that are likely to be impacted by reforms in the energy sector and assess, in detail, the steps taken in case study countries to reform their energy sectors and how the reforms have impacted (or likely to impact) various groups of poor households. The study will have the possibility to design a template for future assessment of the impact of sector reforms on the poor in the study countries.

The PSIA is to inform the Ghana Poverty Reduction Strategy Paper (GPRS) and the Power Sector Reform Committee PRSC2, (a DFID sponsored workshop). Phase I will cover qualitative research and analysis of existing Ghana Living Standards Survey GLSS and Core Welfare Indicators Questionnaire CWIQ data, and limited quantitative surveys. Further, the research is to be narrowed to focus on whether the lifeline tariff is an effective tool in protecting the poor from tariff increases.

A fuller report on both findings mentioned above will be presented in later reports.



Figure 12: Resource persons addressing participants at the REEEP workshop



Figure 14: Participants of the REEEP Workshop

Renewable Energy Technologies (RETs)

KITE's activities in the area of RETs were restricted to the Renewable Energy and Energy Efficiency Partnership (REEEP). The REEEP is an innovative initiative, which was launched by the UK Government in partnership with several countries, businesses and civil society organisations, at the WSSD, in Johannesburg in August, 2002. REEEP aims to accelerate and expand the global market for renewable energy and energy efficiency technologies.

In May, 2003, KITE was formally contracted by the UK Foreign and Commonwealth Office (FCO) to be the REEEP Focal Point for the West African Region. As part of its duties, KITE organized a 2-day regional consultation workshop, in June, 2003 in Accra. The purpose of the workshop was to identify opportunities and gain agreement on collaborative actions to accelerate the development of renewable energy and energy efficiency systems in West Africa.

Subsequent to the Accra workshop, a high-powered Ghanaian delegation led by the Minister of Energy attended the formal launch of the REEEP in the UK, on October, 23. KITE in collaboration with the Energy Foundation responded to a call for proposals from the UK FCO and submitted a joint proposal to develop Energy Service Companies (ESCOs) and promote energy efficiency in the West African sub-region.

African Technology Policy Studies (ATPS) Network

After serving for 5 years as the National Secretariat of the African Technology Policy Studies (ATPS) Network, KITE finally passed on the baton to another institution – Science and Technology Policy Research Institute (STEPRI). The transfer of the secretariat from KITE was preceded by the registration of ATPS-Ghana Chapter as a company limited by guarantee in February 2002, and the appointment of a new National Coordinator by the Board of Trustees of ATPS-Ghana Chapter for an initial term of two years, effective March 1 2003. The new National Coordinator is in the person of Dr George Essegbey, a Senior Scientific Officer of STEPRI.

KITE is grateful to the Board of Trustees and all the members of ATPS-Ghana Chapter for helping to ensure this smooth transition and wishes the new National Coordinator and the ATPS-Ghana Chapter the best of everything in the years ahead. KITE also wishes to express gratitude for the support it received during its tenure of office.

5. Human Resources

During the period under review, KITE Accra Office lost the services of three staff in the persons of Mr. Kofi Nketsia Tabiri, Miss Sophia Ackom and Mr. Frank Asante. They were replaced by Mr. Frank O. Atta-Owusu and Miss Akosua Baah-Kwarteng, both Assistant Project Officers and Mr. Samuel Afari, a Logistics Assistant. The number of full time employees at the end of 2003 stood at twelve (12).

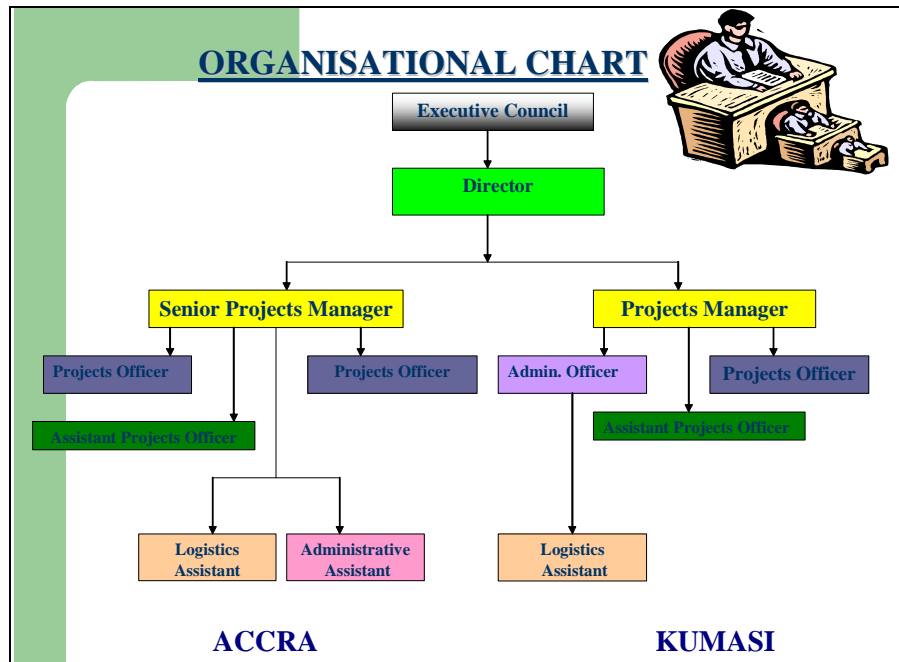


Figure 15: KITE's Organisational Structure for the year ending, 2003

Apart from the full time employees, two National Service Personnel, Mr. Jojo Anamuah Amonoo (Mechanical Engineer) and Miss Joyce Quarcoo (Electrical Engineer) joined KITE. KITE played host to three (3) interns in the persons of Miss Debbie Alsen, Miss Jennifer Robinson and Mr. Mike Quinn all from Engineers Without Borders (EWB), Canada, for various periods ranging from three (3) to six (6) months. Two (2) other interns, Mr. Phil Russell from Oxford University, UK, and Mr. Nana Osei Mainoo from McGill University, Canada, were with KITE for six (6) months and nine (9) months respectively. KITE intends to capitalize on these internships as a means of introducing new ideas and attitudes into the organisation.

Annex

A. Recent Publications

Brew-Hammond, A. and Crole-Rees A., forthcoming, *Towards Greater Access to Energy Services for Rural Poverty Reduction in Africa: A Review of the Multifunctional Platform Project in Mali*, UNDP Sustainable Energy Group, New York.

Hagan, E. B., A. Brew-Hammond and D. Derzu, forthcoming, *Cogeneration from Sawmill Residue in Ghana and Prospects for the Clean Development Mechanism (CDM)*, KNUST Journal of Engineering and Technology.

Edjekumhene I, Bawa M. A. and Brew-Hammond, A, 2003, *Power Sector Reform in Ghana: The Untold Story of a Divided Country Versus a Divided Bank*, Kumasi Institute of Technology and Environment, Kumasi, Ghana.

Edjekumhene I, 2003, *Energy Use, Energy Supply, Sector Reform and the Poor: the Case of Ghana*, Report submitted to the ESMAP –World Bank.

Edjekumhene I, 2003, *Status of Renewable Energy and Energy Efficiency Systems in West Africa*, Background Paper submitted to the Renewable Energy and Energy Efficiency Partnership (REEEP).

Antonio, J., F. Akwensivie, I. A. Edwin, A. Brew-Hammond and F. O. Akuffo, 2003, *Wind Energy Resource Assessment in Ghana*, Paper presented by F. K. Appiah, World Wind Energy Conference, Cape Town, South Africa.

Brew-Hammond, A., 2002, *Rural Energy Poverty and the Environment: A Case for Biofueled Multi-Functional Platforms*, United Nations University Institute for New Technologies (UNU-INTECH) Technology Policy Briefs, Vol. 1, No. 2.

Hagan, E. B., D. Derzu and A. Brew-Hammond, 2002, *Cogeneration from Sawmill Residue in Ghana – Prospects and Challenges*, Paper presented at the International Cogeneration Conference in Amsterdam, The Netherlands.

Edjekumhene I, 2002, *Ensuring Continuous Deployment of Renewable Electricity in Developing Countries as Power Sectors are Reformed*, Chapter in a forthcoming International Energy Initiative Publication.

Edjekumhene I. and Dubash N., 2002, *Achieving Public Benefits by Default*, in Dubash, N (ed), *Power Politics: Equity and Environment in Electricity Reform*, WRI, Washington DC, USA.

B. Financial Statement – As at 31st December, 2003

KITE's income over the years has shown a consistent upward trend as shown in Figure 2, with the total income for year 2003 hitting close to US\$ 230,000 representing 16% over that of 2002. Audited annual accounts are available on request.

C. Income Trends for KITE

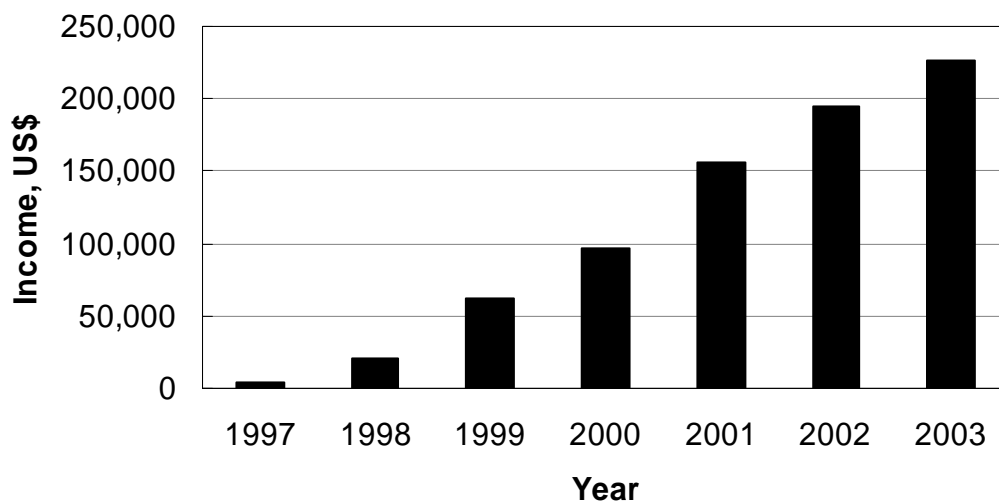


Figure 2: Income Trends for KITE since its Inception

D. Contact Details

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