



PIDA JOBS OUTLOOK SECOND EDITION

“GOING BEYOND INFRASTRUCTURE”



PIDA
INTERCONNECTING
INTEGRATING & TRANSFORMING



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The countries and projects profiled in the PIDA Jobs Outlook are those that have relevant data available in the Virtual PIDA Information Centre (www.pida.africa). The PIDA Job Creation Toolkit uses this data to generate the employment estimates depicted in this PIDA Jobs Outlook. The PIDA Job Creation Toolkit can be accessed at www.jobs.au-pida.org

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FOREWORD

The challenge of unemployment remains prevalent in Africa, especially among young people. According to the African Development Bank (AfDB), young people account for 60% of all unemployed Africans. However, Africa's youth are brimming with abilities that only need to be nurtured and exploited for the continent's development. It is therefore imperative for Africa to create sustainable jobs and employment opportunities at a rapid pace. One way of addressing this problem is through infrastructure development initiatives including the Programme for Infrastructure Development in Africa (PIDA) for which AUDA-NEPAD has developed tools such as the Job Creation Toolkit.

The PIDA Job Creation Toolkit enables project owners and member states to quantify the jobs potential of infrastructure projects so as to situate their development impact and the opportunity cost of slow PIDA project implementation. This is done by analyzing the jobs potential over the cycle of implementation and lifetime of operation so that, project owners and policy makers can take necessary steps to ensure that they are well prepared to reap maximal benefits from their projects.

This second edition of the PIDA Jobs Outlook comes at a time that Africa is defining its infrastructure priorities for the next decade through articulation of the second PIDA Priority Action Plan (PIDA PAP II). The project selection for PIDA PAP II is based on the integrated corridor approach which is a multi-sectoral infrastructure development framework that aims among other things, to make Africa more prosperous by designing and structuring projects to maximize job creation. This objective of job creation is in line with the African Union Agenda 2063 aspiration for "A prosperous Africa based on inclusive growth and sustainable development".





The Outlook presents employment estimates from selected projects in the PIDA portfolio in 34 countries, demonstrating that up to 15 million new jobs could be created through the construction, operation and maintenance of these projects.

In line with the corridor approach, this second edition also highlights two projects that align with the corridor approach: The North South Multimodal Transport corridor and the Inga 3 hydropower project. The North South Multi-modal transport corridor entails the design and implementation of a smart corridor system for both road and rail on the multi-modal African Regional Transport Infrastructure Network (ARTIN) corridor in Southern Africa. In addition to being a PIDA project, this corridor is in the Presidential Infrastructure Champions Initiative (PICI). The Inga 3 hydropower project is one of the flagships of AU's Agenda 2063 with capacity to generate up

to 11GW and hence meet up to 40% of Africa's energy needs. Both these projects demonstrate huge potential to generate a significant number of secondary jobs. The Job Creation Toolkit estimates approximately 97,948 and 129,206,597 secondary jobs could be created over their lifetime by the Inga 3 hydropower plant and the North South Multi-modal transport corridor respectively.

COVID-19 has changed the world as we know it, significantly affecting the economies of nations. As African countries seek a new lease of life to revive their economies, they have a truly unique opportunity for recovery through infrastructure and sustainable energy.

By: Dr. Ibrahim Assane Mayaki, Chief Executive Officer, African Union Development Agency (AUDA-NEPAD)

INTRODUCTION

As the implementing agency for PIDA, the African Union Development Agency (AUDA-NEPAD), supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) acting on behalf of the German Ministry for Economic Cooperation and Development (BMZ) developed an econometric modelling methodology that estimates the labour market effects of PIDA projects.

In 2017 the Ministerial meeting on Infrastructure in Lomé, Togo requested the African Union Commission (AUC) and AUDA-NEPAD to develop a tool to estimate, integrate and promote job creation through infrastructure development. Thus, the PIDA Job Creation Toolkit will be the continent's primary tool to estimate, monitor and evaluate the labour market effects of regional infrastructure.

The demonstration of labour market effects helps to raise the political and financial commitment necessary for PIDA project implementation. In terms of the cross-border and large-scale nature of infrastructure projects in Africa, the development of such a consistent and practical methodology is unprecedented. Moreover, PIDA project owners and their partners can use the Toolkit as a policy planning instrument to assess how alternative project designs may impact African job creation and skills development.

The PIDA Job Creation Toolkit was successfully launched during the 2018 PIDA Week annual conference in Zimbabwe. The inaugural PIDA Jobs Outlook was subsequently launched during the 2019 PIDA Week conference in Cairo. The Outlook feature jobs estimates from selected transport and energy projects in the PIDA portfolio. The Outlook is a tangible demonstration of the Toolkit which allows users to explore ways in which to maximize job creation from infrastructure projects and thus capitalize on Africa's demographic dividend and opportunities for wider regional economic development.





METHODOLOGY

The PIDA Job Creation Toolkit methodology estimates direct, indirect and induced labor market effects during the planning, construction and operation & maintenance (O&M) phases of PIDA projects. Additionally, the methodology estimates secondary job effects, which are those jobs that are being created in other sectors of the economy due to the operational infrastructure service provided (e.g. improved energy access). The employment results illustrated in this Outlook are expressed in job years: the number of jobs created during the entire project phase e.g. 4-year construction period.

The methodology's underlying foundation assumes that project total investment costs will lead to the purchase of goods and services within an economy, which will then create employment. To categorize between the type of jobs and project phases, total project investment costs are broken down per preparation, construction and O&M phase costs. These project costs are considered as industry inputs to the economy, which will yield outputs in the form of direct, indirect and induced jobs i.e. project costs investment split between inputs for project phases purchase of goods and services. The toolkit user has to input the project investment data per project phase and specific inputs into the toolkit survey to retrieve job estimates. The minimum data for the Toolkit to estimate jobs are construction costs. If only this value is provided, the Toolkit uses benchmarks for the other inputs.

To generate job estimates national Input-Output (I-O) tables are created. Used by governments, development institutions, and international organizations worldwide as best practice, I-O tables describe the sale and purchase relationships between producers and consumers in an economy. I-O tables for African countries, national I-O tables, have been generated respectively. As I-O tables depict the inter-industrial flow of goods and services per input to the economy, inter-sectoral coefficients can be used to estimate the additional employment being generated by the project investments (purchase of goods and services) on each host country's national economy. The methodology can account for missing data: as not all projects provide the investment breakdown for preparation, construction and O&M costs, sub-sector

specific industry ratios per project phase serve as a benchmark to provide the needed investment input to the economy (e.g. on average 55.2% of the total hydropower plant costs are dedicated to civil works in hydropower construction).

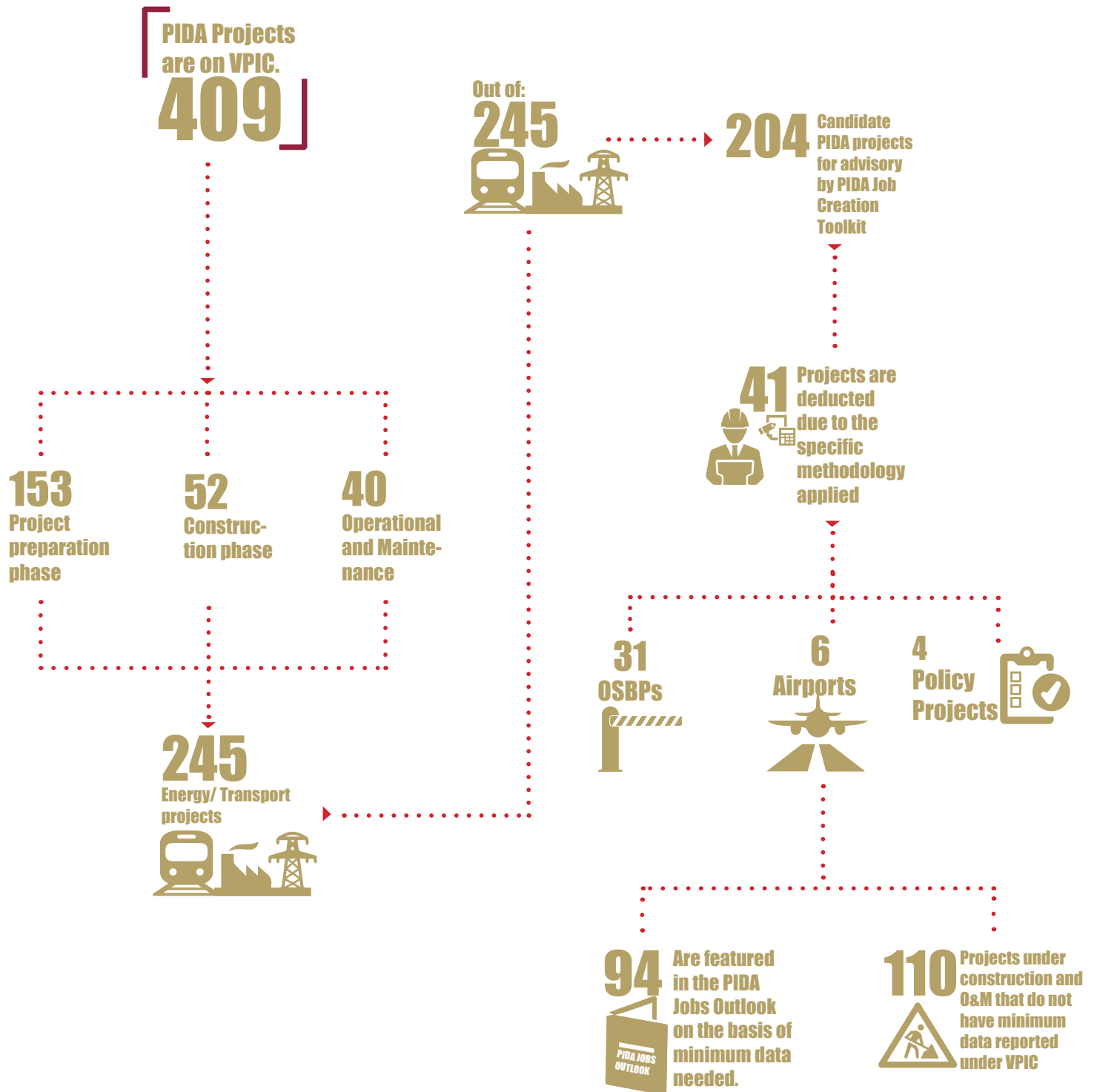
The estimation of secondary job effects is sector-specific and uses chain ratio analysis to estimate the economic spillover effects based on the specific sector. For example: in the case of energy generation, the methodology begins by subtracting distribution and transmission losses from the projected additional power supply of the respective project. This adjusted number is then converted to the dollar value of additional supply per kWh to calculate the total electrical input in USD value, which is then entered as additional electricity input in the I-O table to calculate its overall economic impact. The secondary job impact of a PIDA Project is usually the largest, given its transformative impacts, such as increasing a country's supply of energy or the ability to increase trade flows across countries.

In this publication you will find:

- Estimates of direct jobs created by the project during the preparation, construction, and operation and maintenance phase of the project
- Estimates of secondary jobs resulting from anticipated improved infrastructure services
- Data on countries top three performing economic sectors based on secondary job estimations and selected projects
- Analysis of two PIDA corridors to contextualize job estimates

Kindly note that the Outlook only captures PIDA transport and energy projects under preparation, construction and O&M phases for which relevant data has been reported under the PIDA Virtual Information Center to be able to generate job estimations on the PIDA Job Creation Toolkit. AUDA-NEPAD encourages its Member States to provide updated data as listed for the number of PIDA projects per country under Annex 1 (PIDA project information can be further accessed on VPIC www.pida.africa).

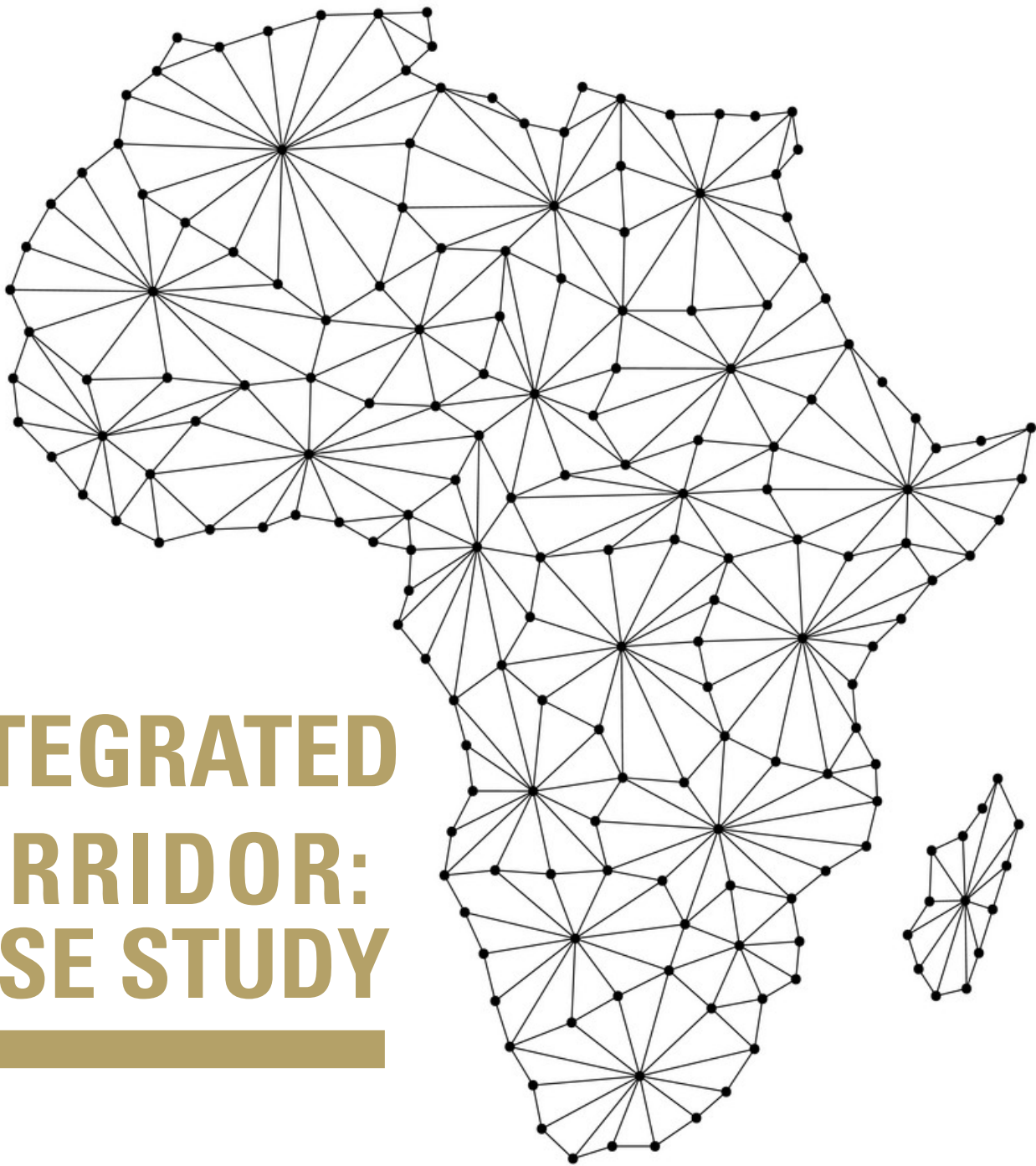
PIDA PROJECT SELECTION FLOW CHART





DEFINITIONS

Term	Definition
Average Annual Jobs:	The average number of annual jobs. The average annual number of jobs is calculated by dividing total job years by the number of years for the project's life cycle (project preparation, construction, and operation).
Direct Jobs	Jobs created directly by the project activities
Secondary Jobs	Jobs created in the wider economy due to the infrastructure service provided
Job years	The total number of job years over the lifetime of a project. One job for one year is one "job year." If that job continues for another 12 months, it is two "job years." For example, if a project worker is working 5 years, the total job years for that worker is 5 years.



INTEGRATED CORRIDOR: CASE STUDY



INTRODUCTION TO THE INTEGRATED CORRIDORS

In the context of PIDA, AUDA-NEPAD seeks to adopt the concept of an integrated approach in infrastructure development for the PIDA PAP II projects which are set for implementation from 2021-2030. In part this refers to the development of a multisectoral infrastructure corridor approach as endorsed during the 2017 PIDA Week annual conference. The corridor approach serves as the basis to ensure that future cross-border infrastructure planning connects the sectors of transport, energy, water and ICT to deliver integrated infrastructure services and to better facilitate the creation of Special Economic Zones, logistics and manufacturing hubs etc. Furthermore, it is emphasised that the development of the PIDA corridor approach with planning and implementation should also be gender sensitive, employment oriented, environmentally friendly and serve to connect rural areas.

The second edition of the PIDA Jobs Outlook profiles two PIDA programmes that embody this approach, namely;

- A. The Inga 3 Hydropower Plant project in the Democratic Republic of Congo which will generate 11 050 MW with transmissions lines within DRC and across borders.
- B. The North South Multimodal Transport Corridor which entails the design and implementation of a smart corridor system for both road and rail on the multimodal African Regional Transport Infrastructure Network (ARTIN) in Southern Africa.





INGA 3



INGA 3 HYDROPOWER PLANT

1. OVERVIEW

In the AU framework, the grand INGA project falls under the Regional Economic Community ECCAS. However due to the treaty between South Africa and the DRC for South Africa's anchor offtake Power Purchase Agreement (PPA) from Inga 3, the Southern African Development Community (SADC) is coordinating development of the transmission lines to evacuate power to South Africa through the Southern African Power Pool (SAPP). Some of the key stakeholders involved in the project include:

- Agency for the Development and Promotion of the Grand Inga – DRC (ADPI-DRC): Lead National Agency DRC-Ministry of Energy and water Resources (MERH) National coordination
- Southern African Power Pool Project Advisory Unit (SAPP-PAU)
- National Power Utilities of the DRC, Zambia, Zimbabwe and South Africa.

Inga 3 hydropower plant is part of the Grand Inga Dam project which is one of the world's largest proposed hydropower schemes. The ultimate objective of the Grand Inga Project, of which Inga 3 is an essential and critical part, is to bring affordable, abundant, reliable and clean electricity to the Democratic Republic of the Congo (DRC) and other African countries, to facilitate economic development and to improve the standards of living.

2. SIGNIFICANCE OF THE PROJECT

With the potential to generate 11 050 MW, the Inga 3 hydropower plant would enable the dam to supply electricity to not only the DRC but a significant proportion of the rest of Africa. The project thus offers energy export opportunities on the African continent, particularly to the energy hubs of Central, East, North, Southern and West Africa. The project could meet up to 40% of the continent's electricity needs. Because

of its impact at the continental level, the Grand Inga project which includes the Inga 3 hydropower plant is an African Union Agenda 2063 flagship project and a priority project for ECCAS and SADC respectively.

As part of its mandate, to facilitate and coordinate the implementation of Africa's priority programs and projects, AU-DA-NEPAD is supporting ADPI in order to take the appropriate and practical measures to accelerate the Inga 3 project. The Inga 3 hydropower plant is vital for the development of the DRC in that it will transform the power supply of not only the country, but the southern African region. Currently the average cost of electricity in the region is 0.06 USD/KWh and through the Inga 3 project this could be reduced by as much as up to 50%. This low-cost power will lead to increased regional energy trade, improved energy security and industrial development in the region. Since hydropower is a renewable energy source, greenhouse gas emissions may be reduced.

Despite the presence of hydropower plant such as Inga I and Inga II with production capacities of 351 MW and 1424 MW respectively, the energy demand in the ECCAS remains quite high as less than **10% of the population** has access to electricity according to the International Energy Agency's (IEA) Africa Energy Outlook 2019 report. The figures below show the rates of access to electricity in the region:

CURRENT ACCESS RATE: 9%
RURAL: 1% URBAN: 19%
HOUSEHOLDS WITHOUT POWER: 15 MILLION



3. IMPLEMENTATION STATUS:

The revised project capacity of Inga 3 hydropower plant 11 050 MW is valued at around 14 billion USD with anticipated funding from several sources including the African Development Bank. Currently, the project is at the Transaction Support & Financial Close stage in the implementation process. A virtual technical conference of experts was convened by the Government of the DRC in June 2020 . One of the main objectives was to encourage in-depth dialogue and investment collaboration between public and private entrepreneurs and the highest political and economic authorities, both locally and at the continental level in the DRC. The DRC has opted to develop the Inga 3 sub-project in public-private partnership (PPP), especially in Build - Operate –Transfer (BOT). The DRC is continuing with stakeholder consultations and preparation of a high-level summit on Inga in 2021. The Summit would be an opportunity to address Africa’s electricity shortages and the concrete actions towards the development of Inga II towards achieving the goal of access to affordable, green, sustainable energy.

4. JOB CREATION POTENTIAL AND MICRO-ECONOMIC ANALYSIS OVERVIEW

According to the PIDA Job Creation Toolkit the Inga 3 hydro-power project has the potential to create over 97,948 secondary jobs (calculated in average annual jobs), once the plant is operational. The resulting impact would be mainly in three sectors: Cement, Mineral, Chemical, Petroleum & Other Products as the main beneficiary sector, followed by Construction Labour and Trade.

Based on the anticipated job potential of the Inga 3 hydro-power plant, it becomes important to have a micro-economic analysis of what does this mean for the labour market of the country and region, in order to be able to plan better to realize domestic labour market potential. The mineral extraction

industry is the backbone of the Congolese economy. Copper and cobalt, which is a by-product of copper, accounts for 85% of the country’s exports with the Cement, Mineral, Chemical, Petroleum & Other products as being one of the top economic sectors that would benefit the most with The operationalization of Inga 3 hydropower plant. Hence the employment opportunities potentially created by an operational Inga 3 Dam in this extractives sectors bears potential to be further developed.





NORTH-SOUTH MULTI-MODAL TRANSPORT CORRIDOR

NORTH-SOUTH MULTI-MODAL TRANSPORT CORRIDOR

1. OVERVIEW

The North-South Multimodal Transport consists of road, rail, One Stop Border Posts (OSBP), and ports. The corridor is designed to modernize Southern Africa's transportation sector on modern standards and facilitate travel of people and goods across the borders by addressing transport constraints in the region in a sequenced and multi-modal way.

The North-South Multimodal Transport Corridor programme is currently championed by the South African Presidency through the Presidential Infrastructure Champion's Initiative (PICI) as the current chairperson of the African Union (AU).

The corridor is a SADC-EAC-COMESA tripartite programme that seeks to deviate from the traditional national approach of improving national infrastructure from a national perspective, but to recognise the interconnectedness of creating and therefore improving national infrastructure with the overall aim that it contributes to regional improvement of infrastructure and thus facilitates the creation of corridors that enables regional economic integration and regional trade.

The North-South Multimodal Transport corridor is a programme that requires coordination between 8 countries, namely: South Africa, Botswana, Mozambique, Zambia, Zimbabwe, Tanzania, Malawi, and Democratic Republic of the Congo. To ensure effective communication and implementation of the project the coordination of the corridor is supported by the following regional economic communities:

- Southern African Development Community (SADC)
- Common Market for Eastern and Southern Africa (COMESA)
- East African Community (EAC)

The North-South Multimodal transport corridor consist of a total of 22 projects, these can be categorized as follows:

- **15 ROAD PROJECTS**
- **1 BRIDGE**
- **1 RAILWAY**
- **2 ON STOP BORDER POSTS (OSBP)**
- **3 STUDY/REGULATORY PROJECTS**

Of these, the following projects are currently profiled in the PIDA Job Creation Toolkit and thus form the basis for the job estimates presented for the Corridor.

- Bulawayo - Gwanda Road
- Chingola - Solwezi Railway Extension
- Chirundu - Harare Road Link 1 (Chirundu Border Post - Makuti - Hells Gate)
- Chirundu - Harare Road Link 2 (Makuti to Karoi)
- Chirundu - Harare Road Link 3 (Karoi to Chinhoyi)
- Chirundu - Harare Road Link 4 (Chinhoyi to Harare)
- Gwanda - Beitbridge Road
- Harare - Beitbridge Road Link 1 (Harare to Chivhu)
- Harare - Beitbridge Road Link 2 (Chivhu to Masvingo)
- Harare - Beitbridge Road Link 3 (Masvingo to Turn Off)
- Harare - Beitbridge Road Link 4 (Turn Off to Beitbridge Border Post)
- Harare - Nyamapanda Road Project
- Kitwe - Chingola Road
- Serenje - Nakonde Road Link 1 (Serenje - Mpika)
- Serenje - Nakonde Road Link 2 (Mpika - Chinsali)
- Serenje - Nakonde Road Link 3 (Chinsali - Nakonde)

2. IMPLEMENTATION STATUS:

The corridor is estimated to cost **4.5 billion USD for capital investment** whilst 2.4 billion USD is said to be recurrent costs, most of these projects at the preparation phase with few projects advancing to the construction stage. Transport infrastructure projects are generally considered to be challenging to finance, the North-South Transport Corridor is no exception. To attract financing for the corridor the coordinating authorities are working on proposals to finance this regional infrastructure through region-wide revenue sources, regional instruments, importantly these proposals would be strengthened through political championing for regional coordination.

3. SIGNIFICANCE OF THE PROJECT

The operationalization of the North-South Multimodal Transport Corridor will result in the creation of about 6 197 km of road through road upgrades by the programme this is a significantly good number considering 95% of goods are being transported by road in the region which is financed through tariffs and efficiencies. Once the upgrading has been completed it is anticipated that the improvements particularly at the border posts will result in 50% reduction of crossing time for goods and arguable reduced transportation costs and stimulating economic development around neighbouring regions.

With the adoption of the African Continental Free Trade Agreement that seeks to establish a single market for goods and services, in hopes of boosting trade among African countries, the North South Multimodal Transport Corridor countries once the projects are operational can benefit immensely through increased regional trade and boosting socio-economic development through increased economic activities.

4. JOB CREATION POTENTIAL AND MICRO-ECONOMIC ANALYSIS OVERVIEW

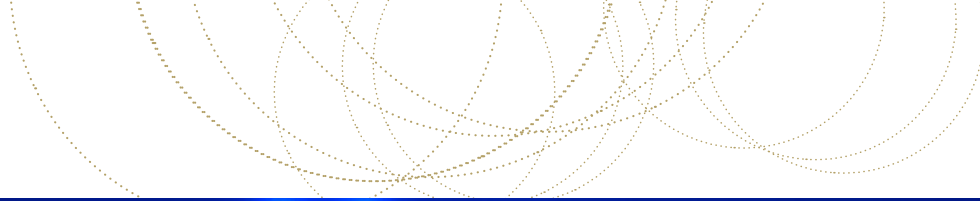
According to the PIDA Job Creation Toolkit the North South Multimodal Transport Corridor has the potential to create over 129 206 secondary jobs (average annual jobs) resulting in a visible impact mainly in the following three sectors; Agriculture & Food

Products; Mining; and Trade as the economic sectors that would benefit the most from the implementation of these 16 projects. Additionally, a total of over 4 516 282 direct jobs (average annual jobs) that will be realized during the construction and operation and maintenance of the project during the project lifecycles.

In the case of the North-South Multimodal Transport Corridor, Zimbabwe as a country will benefit the most as it has a number of projects either as a host country or being a beneficiary country as such a notable growth in the sector of Agriculture & Food Products sectors which is the backbone of Zimbabwe's economy which provides employment and income for 60-70 % of the population will be experienced. The Agriculture & Food products sector in the country contributes 40% of total export earning in the country, subsequently contributing to increased trading activities in the region.

The job estimation potential for the corridor can enable the NSC coordinating countries to plan for anticipated job potential and therefore put necessary government interventions to absorb the labour demand.





COUNTRY PROFILES





INTRODUCTION TO COUNTRY PROFILES

This section provides an overview of job estimations for 34 African countries that have data from information extracted on the Virtual PIDA Information Center (PIDA project information can be further accessed on VPIC www.pida.africa).The profiles focus namely on the following five features:

1. PIDA projects published in the Toolkit
2. Direct Jobs estimations (measured in average annual jobs)
3. Secondary Jobs estimations (measured average annual jobs)
4. List of PIDA projects in that specific country
5. Top 3 Economic Sectors (ranked according to secondary jobs estimations)

ANGOLA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
3	16,110	636,809	<ul style="list-style-type: none"> DRC - Angola Transmission Interconnector (DRC section) Inga 3 Hydropower Plant Chingola - Solwezi Railway Extension 	<ul style="list-style-type: none"> Electricity, Gas and Water Generation & Distribution Trade Cement, Mineral, Chemical, Petroleum & Other Products

BENIN



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	65,620	286,924	<ul style="list-style-type: none"> 330 kV Ghana – Togo – Benin Transmission Interconnection Project Abidjan - Lagos Corridor Highway 	<ul style="list-style-type: none"> Cement, Mineral, Chemical, Petroleum & Other Products Construction Labour Transport

BURUNDI



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
7	57,622	250,657	<ul style="list-style-type: none"> Ruzizi III Hydropower Plant Gitega - Karuzi - Muyinga (RN12) Road Kayanza - Bugarama Road Bujumbura - Bugarama Road Kobero - Muyinga Road Nyakarara - Mwaro - Mweya -Gitega (RN18) Road Upgrade Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade 	<ul style="list-style-type: none"> Agriculture & Food Products Electricity, Gas, and Water Generation & Distribution Mining

BOTSWANA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
6	20,706	74,365	<ul style="list-style-type: none"> Gwanda - Beitbridge Road Batoka Gorge Hydro Electric Power Scheme Inga 3 Hydropower Plant Serenje - Nakonde Road Link 1 (Serenje - Mpika) Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) 	<ul style="list-style-type: none"> Agriculture & Food Products Mining Metal Products

CAMEROON



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
4	76,411	556,591	<ul style="list-style-type: none"> Yaounde-Brazzaville Road (Cameroon section) Kribi Port Upgrade Garoua - Boulai - N'Gaoundéré Road Ketta-Djoum Road 	<ul style="list-style-type: none"> Cement, Mineral, Chemical, Petroleum & Other Products Agriculture & Food Products Trade

CHAD



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
1	11,037	36,523	<ul style="list-style-type: none"> Ouessou-Bangui-Ndjamena Corridor Road Project 	<ul style="list-style-type: none"> Construction Labour Transport Cement, Mineral, Chemical, Petroleum & Other Products

CENTRAL AFRICAN REPUBLIC



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	11,037	31,199	<ul style="list-style-type: none"> Ruzizi III Hydropower Plant Gitega - Karuzi - Muyinga (RN12) Road Kayanza - Bugarama Road Bujumbura - Bugarama Road Kobero - Muyinga Road Nyakarara - Mwaro - Mweya -Gitega (RN18) Road Upgrade Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade 	<ul style="list-style-type: none"> Agriculture & Food Products Mining Cement, Mineral, Chemical, Petroleum & Other Product Agriculture & Food Products Trade

CONGO, REPUBLIC



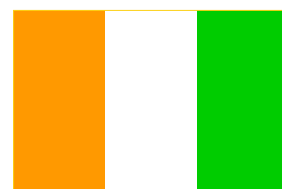
PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	11,037	31,199	<ul style="list-style-type: none"> Kinshasa - Ilebo Railway Pointe Noire Port Upgrading Brazzaville-Kinshasa Road/Rail Bridge Ouessou-Bangui-Ndjamenia Corridor Road Project Ketta-Djoum Road Ndende - Doussala - Dolisie Inga 3 Hydropower Plant 	<ul style="list-style-type: none"> Mining Agriculture & Food Products Trade

DEMOCRATIC REPUBLIC OF CONGO



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
9	663,96	7,333,499	<ul style="list-style-type: none"> Inga 3 Hydropower Plant Brazzaville-Kinshasa Road/Rail Bridge DRC - Angola Transmission Interconnector (DRC section) Goma-Kisangani Road (DRC National Road No,2) Ruzizi III Hydropower Plant Chingola - Solwezi Railway Extension Serenje - Nakonde Road Link 1 (Serenje - Mpika) Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) 	<ul style="list-style-type: none"> Electricity, Gas and Water Generation & Distribution Cement, Mineral, Chemical, Petroleum & Other Products Trade

CÔTE D'IVOIRE



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	17,604	982,425	<ul style="list-style-type: none"> 225 kV Côte d'Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project Abidjan - Lagos Corridor Highway 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Cement, Mineral, Chemical, Petroleum & Other Products Trade

EGYPT



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
3	11,393	1,862,858	<ul style="list-style-type: none"> Egypt - Sudan Transmission Interconnector (Egypt section) Egypt - Libya section of ELTAM Transmission Interconnector (Egypt part) Inga 3 Hydropower PlantW 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Cement, Mineral, Chemical, Petroleum & Other Products

ETHIOPIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	1,188,135	24,265,703	<ul style="list-style-type: none"> Grand Ethiopian Renaissance Dam (GERD) Ethiopia - Sudan Transmission Interconnector (Sudan section) Libreville-Brazzaville Road (Gabon section) Ndende - Doussala - Dolisie 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Agriculture & Food Products Business Services

GABON



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	37,332	42,818	<ul style="list-style-type: none"> • Libreville-Brazzaville Road (Gabon section) • Ndende - Doussala - Dolisie 	<ul style="list-style-type: none"> • Mining • Agriculture & Food Products • Trade

GHANA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	51,553	855,817	<ul style="list-style-type: none"> • 330 kV Ghana – Togo – Benin Transmission Interconnection Project • Abidjan - Lagos Corridor Highway 	<ul style="list-style-type: none"> • Mining • Agriculture & Food Products • Trade

GUINEA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
3	281,58	761,252	<ul style="list-style-type: none"> Sambangalou Hydropower Plant Kaléta Hydropower Plant 225 kV Côte d'Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Agriculture & Food Products Business Services

KENYA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
16	12,912,875	7,115,563	<ul style="list-style-type: none"> Railway (part of Mombasa - Kigali Railway Project) Nairobi - Malaba Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Mombasa Port New Petroleum Facility Mombasa Port New Container Terminal ZTK Transmission Interconnector (Kenya section) ZTK Transmission Interconnector (Zambia section) Eldoret - Nadapal Road Nairobi Southern Bypass Upgrading Bachuma Gate – Maji ya Chumvi Road Mombasa Southern Bypass Road Mombasa - Voi Road Mirama Hills - Kigali Railway (part of Mombasa - Kigali Project) Malaba - Kampala Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kampala - Kasese Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kasese - Mirama Hills Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kisumu Lake Port Upgrading 	<ul style="list-style-type: none"> Agriculture & Food Products Electricity, Gas, and Water Generation & Distribution Cement, Mineral, Chemical, Petroleum & Other Products

LIBERIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
1	7,739	541,817	<ul style="list-style-type: none"> 225 kV Côte d'Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Business Services Mining

LIBYA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
2	922	250,682	<ul style="list-style-type: none"> Libya - Tunisia section of ELTAM Transmission Interconnector (Libya part) Egypt - Libya section of ELTAM Transmission Interconnector (Egypt part) 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Mining Trade

MALAWI



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
5	8,274	492,345	<ul style="list-style-type: none"> Harare - Nyamapanda Road Project Serenje - Nakonde Road Link 1 (Serenje - Mpika) Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade 	<ul style="list-style-type: none"> Agriculture & Food Products Other Services Transport

MALI



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	95,003	1,852,720	<ul style="list-style-type: none"> Dakar - Bamako Standard Gauge Railway (Senegal section) Mako-Dialocoto Road 	<ul style="list-style-type: none"> Agriculture & Food Products Mining Trade

MOZAMBIQUE



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
10	946,506	25,890,043	<ul style="list-style-type: none"> Mpanda Nkuwa Hydropower Plant (HMNK) Maputo Port Expansion Nacala Port New Coal Terminal Mozambique - Zambia Transmission Interconnector (Mozambique section) Nacala Railway Line Beira New Coal Terminal Development Sena Railway Line Rehabilitation Beira Port Dredging Tete Toll Bridge Harare - Nyamapanda Road Project 	<ul style="list-style-type: none"> Agriculture & Food Products Mining Trade

NAMIBIA



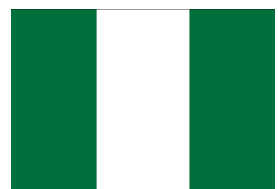
PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
5	13,882	214,848	<ul style="list-style-type: none"> Walvis Bay Port New Container Terminal Batoka Gorge Hydro Electric Power Scheme Inga 3 Hydropower Plant Serenje - Nakonde Road Link 1 (Serenje - Mpika) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) 	<ul style="list-style-type: none"> Agriculture & Food Products Electricity, Gas, and Water Generation & Distribution Trade

NIGER



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
1	7,465	207,507	<ul style="list-style-type: none"> TAH2: Algiers to Lagos- Missing Road Links in Niger 	<ul style="list-style-type: none"> Agriculture & Food Products Mining Business Services

NIGERIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	23,391	2,195,376	<ul style="list-style-type: none"> Inga 3 Hydropower Plant Abidjan - Lagos Corridor Highway 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Transport

RWANDA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
10	1,295,034	652,158	<ul style="list-style-type: none"> Mirama Hills - Kigali Railway (part of Mombasa - Kigali Project) Regional Rusumo Falls Hydroelectric Power Project II Ruzizi III Hydropower Plant Kampala - Kasese Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Nairobi - Malaba Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Malaba - Kampala Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kasese - Mirama Hills Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Isaka - Kigali Standard Gauge Railway Dar es Salaam - Isaka - Mwanza/Kigali Standard Gauge Railway Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Transport

SENEGAL



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	44,688	415,362	<ul style="list-style-type: none"> Dakar - Bamako Standard Gauge Railway (Senegal section) Sambangalou Hydropower Plant 	<ul style="list-style-type: none"> Agriculture & Food Products Electricity, Gas, and Water Generation & Distribution Trade

SIERRA LEONE



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
1	7,757	287,495	<ul style="list-style-type: none"> 225 kV Côte d'Ivoire – Liberia - Sierra Leone - Guinea Interconnection Project 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Business Services Mining

SOUTH AFRICA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/annually)
7	115,313	2,901,949	<ul style="list-style-type: none"> Inga 3 Hydropower Plant Durban Port Expansion South Africa - Zimbabwe Second Transmission Interconnector (Zimbabwe section) South Africa - Zimbabwe Second Transmission Interconnector (South Africa section) Harare - Nyamapanda Road Project Gwanda - Beitbridge Road Bulawayo - Gwanda Road 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Mining Trade

SUDAN



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	13,098	1,770,285	<ul style="list-style-type: none"> Egypt-Sudan Transmission Interconnector (Egypt section) Ethiopia - Sudan Transmission Interconnector (Sudan section) 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Mining Trade

TOGO



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	49,621	43,228	<ul style="list-style-type: none"> Abidjan - Lagos Corridor Highway 330 kV Ghana – Togo – Benin Transmission Interconnection Project 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Business Services

TANZANIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
7	115,313	2,901,949	<ul style="list-style-type: none"> ZTK Transmission Interconnector (Tanzania section - Iringa to Shinyanga) Isaka - Kigali Standard Gauge Railway Dar es Salaam - Isaka - Mwanza/Kigali Standard Gauge Railway Dar es Salaam New Container Terminal Dar es Salaam New Berths Vijibweni, Mbwamaji and Kunduchi Dar es Salaam Port Modernisation Mwanza Port Dredging and Upgrading ZTK Transmission Interconnector (Kenya section) ZTK Transmission Interconnector (Tanzania section - Singida to Namanga) Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade Mpanda-Kasulu-Nyakanazi and Kasulu-Kigoma Roads Nyahua-Chaya, Urambo-Kaliua, Kazirambwa-Chagu and Malagarasi-Uvinza Roads Lusahunga-Rusumo Road Tabora-Nyahua Road ZTK Transmission Interconnector (Zambia section) Regional Rusumo Falls Hydroelectric Power Project II Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Mining Trade

TUNISIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
2	1,056	341,102	<ul style="list-style-type: none"> Libya - Tunisia section of ELTAM Transmission Interconnector (Libya part) Algeria - Tunisia section of ELTAM Transmission Interconnector (Tunisia part) 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Transport

UGANDA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
9	3,693,628	6,004,116	<ul style="list-style-type: none"> Kampala - Kasese Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kasese - Mirama Hills Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Malaba - Kampala Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Kampala-Jinja Road Kampala Bombo Expressway Road Mirama Hills - Kigali Railway (part of Mombasa - Kigali Project) Nairobi - Malaba Standard Gauge Railway (part of Mombasa - Kigali Railway Project) Isaka - Kigali Standard Gauge Railway Dar es Salaam - Isaka - Mwanza/Kigali Standard Gauge Railway 	<ul style="list-style-type: none"> Agriculture & Food Products Manufacturing Trade

ZAMBIA



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
12	161,584	4,505,159	<ul style="list-style-type: none"> Batoka Gorge Hydro Electric Power Scheme Chingola - Solwezi Railway Extension Mozambique - Zambia Transmission Interconnector (Mozambique section) ZTK Transmission Interconnector (Kenya section) Serenje - Nakonde Road Link 1 (Serenje - Mpika) Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) Serenje - Nakonde Road Link 2 (Mpika - Chinsali) Gwanda - Beitbridge Road ZTK Transmission Interconnector (Zambia section) Inga 3 Hydropower Plant Bulawayo - Gwanda Road Dar es Salaam - Chalinze - Morogoro Road Capacity Upgrade 	<ul style="list-style-type: none"> Electricity, Gas, and Water Generation & Distribution Trade Transport

ZIMBABWE



PIDA projects published in the Toolkit	Direct Jobs: (Average annual jobs)	Secondary Jobs: (Average annual jobs)	PIDA PROJECTS	Top 3 Economic Sectors (ranked according to secondary jobs/ annually)
18	150,399	5,632,377	<ul style="list-style-type: none"> • South Africa - Zimbabwe Second Transmission Interconnector (Zimbabwe section) • South Africa - Zimbabwe Second Transmission Interconnector (South Africa section) • Batoka Gorge Hydro Electric Power Scheme • Bulawayo - Gwanda Road • Chirundu - Harare Road Link 4 (Chinhoyi to Harare) • Harare - Beitbridge Road Link 3 (Masvingo to Turn Off) • Chirundu - Harare Road Link 3 (Karoi to Chinhoyi) • Chirundu - Harare Road Link 2 (Makuti to Karoi) • Chirundu - Harare Road Link 1 (Chirundu Border Post - Makuti - Hells Gate) • Harare - Nyamapanda Road Project • Gwanda - Beitbridge Road • Inga 3 Hydropower Plant • Harare - Beitbridge Road Link 4 (Turn Off to Beitbridge Border Post) • Harare - Beitbridge Road Link 2 (Chivhu to Masvingo) • Harare - Beitbridge Road Link 1 (Harare to Chivhu) • Serenje - Nakonde Road Link 1 (Serenje - Mpika) • Serenje - Nakonde Road Link 3 (Chinsali - Nakonde) • Serenje - Nakonde Road Link 2 (Mpika - Chinsali) 	<ul style="list-style-type: none"> • Electricity, Gas, and Water Generation & Distribution • Agriculture & Food Products • Mining

PIDA PROJECTS PER COUNTRY

Country	Projects
Algeria	9
Angola	10
Benin	9
Botswana	2
Burkina Faso	8
Burundi	14
Cabo Verde	1
Cameroon	22
Central African Republic (CAR)	11
Chad	14
Comoros	1
Democratic Republic of Congo	25
Cote d'Ivoire	13
Congo	19
Libya	9
Madagascar	1
Malawi	6
Mali	13
Mauritania	3
Mauritius	1
Morocco	3
Mozambique	17
Namibia	5
Niger	12
Nigeria	11
Rwanda	9
Sao Tome and Principe	1
Senegal	9

Country	Projects
Djibouti	4
Egypt	6
Equatorial Guinea	8
Eritrea	2
Eswatini	1
Ethiopia	7
Gabon	7
Gambia	1
Ghana	9
Guinea	9
Guinea-Bissau	2
Kenya	27
Lesotho	1
Liberia	3
Seychelles	1
Sierra Leone	3
Somalia	3
South Africa	5
South Sudan	9
Sudan	8
Tanzania	37
Togo	7
Tunisia	5
Uganda	21
Zambia	12
Zimbabwe	20



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