Standards used were mainly NATIONAL (different) standards from the colonizing countries (British/French/German, etc).

1960’s - “Unscramble from Africa” by Europe

Hiatus in the standards infrastructure (if it existed)

Few national standards bodies - cooperation through OAU/ARSO: 1970. But little capacity to consider electrotechnical standards

Development of regional trading blocks (e.g. SADC/COMESA) - hampered by lack of infrastructure to agree on standards/regulations

Porous borders - imports of poor quality goods

Little capacity for local manufacture of electrical equipment/ even less to test for compliance to standards

Little capacity/structure to evaluate/adopt international electrotechnical standards
* Recognition of need for improving the standardization infrastructure for the physical infrastructure in the founding documents of NEPAD/AU and African Energy Commission AFREC

* Millennium development goals targets
  * Electrification - universal access : SE4ALL

* Net generation shortage to meet the needs-
  alternative technologies - new standards
  (PV/Wind/tidal/CSP/electrical energy storage)
  * and new conformity assessment systems
*Cross border exchange of power hampered due to different standards

*Huge electrification challenge bringing opportunities for developing local manufacture

*Evolution to “Smart(er) grids”/power network integration. Opportunity to ‘leapfrog’ technologies

*Telecommunications infrastructure evolving fast - close collaboration needed to agree on standards to support future energy industry needs.
The size implies massive needs and opportunities for infrastructure development—requiring appropriate standards.

Some 58% (590 million and growing) waiting for access to electricity and electrical appliances conforming to appropriate standards.
<table>
<thead>
<tr>
<th>Region</th>
<th>Population without electricity (million)</th>
<th>Electrification rate (%)</th>
<th>Urban electrification rate (%)</th>
<th>Rural electrification rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>590</td>
<td>42.9</td>
<td>72.1</td>
<td>23.6</td>
</tr>
<tr>
<td>North Africa</td>
<td>1</td>
<td>99.4</td>
<td>100</td>
<td>98.7</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>589</td>
<td>31.8</td>
<td>64.2</td>
<td>12.9</td>
</tr>
</tbody>
</table>
Several connections between power pools are now planned that will result in an interconnected pan-African grid firmly connected to the European grid.
Progress 2009 - to present

- Membership growing slowly: from 10 founding members in 2008 to 14
  - 2010/11: Namibia and Rwanda
  - 2013: DR Congo, Zambia
  - A few of the founding members still to become active

- Affiliate members
  - African Power Pools Southern & Eastern
  - Power Institute for East and Southern Africa
  - SADC, via SADCSTAN
  - APUA and AFREC

- Cooperation agreements
  - IEC October 2009
  - CENELEC October 2011
  - DKE Germany - October 2012
  - MoU with ARSO and multilateral MoU with other PAQI Institutions

- Some funding received from the AUC via African Energy Commission (AFREC) 2009 - since solely funded by membership fees

- Funds approved from AUC to support the activities in 2014
  - Also from PTB German for specific projects

- Secretariat - South Africa: Temporarily hosted in SABS since April 2012
Five technical committees established, to mirror the work of IEC TC 13, TC 8; TC 13; TC 57; TC 64; TC 77

Capacity building workshops on
- technical committee operations
- IECEX conformity assessment system
- IECEE conformity assessment system
- Rural electrification

Mirror committee for IEC TC 82 was established in July 2014
Project to develop rural electrification guidelines for Africa
Mirror committee for IEC TC 31 was established in July 2015

1st Africa Smart grid forum, May 2014: Abidjan
2nd Africa Smart grid forum will be in March 2016 in Cairo, Egypt
* Although some 39 African countries in IEC affiliate country programme, many have yet to adopted ANY IEC standards as national reference standards

* Among the remainder + 8 members/associate members, each country adopts standards according to national interests, but with no coordination of needs for regional integration. AFSEC is set to fill that role.

* Synergy among national electrotechnical committees in Africa
* Meaningful influence of any one African country on IEC standards will be minimal (one country/one vote)
* Collective cooperation could increase the African influence on IEC standards
* AFSEC provides the framework for that to happen
* AFSEC will form a conformity assessment (CA) committee was inaugurated in July 2014
* NECs can be elected to the CAC (regional representatives)
* Promotion of/application of CA systems at a pan Africa level.
* IEC affiliates - collaboration with IEC for capacity building to be able to use its CA systems
Electrotechnical infrastructure development in Africa is an exciting reality

- Power pool integration/cross border trade of power
- Multi-country megaprojects
- Pan-African power grid
- Smart-grid evolution
- Universal access to electricity/modern energy systems in Africa/appropriate appliances for African consumers
- Improved quality of electrical equipment, materials and appliances

It requires a standardization framework for stakeholders to reach agreement on the standards to be used, and improved conformity assessment.

AFSEC has been established for this purpose.

For AFSEC to be effective it requires increased membership and active participation of stakeholders/collaboration with other institutions