CHAPTER 10

PRODUCING SECTORS
Within the framework of the overall development strategy, the government continues to give priority to the development of the producing sectors. These sectors constitute the driving force of the economy, and play an essential role in the process of economic diversification, which began to accelerate during the previous plan period and is expected to gain considerable momentum in the Fifth Plan.

The Fifth Plan aims at increasing the share of the producing sectors in GDP from 38.5 percent at the beginning of the period to 43.3 percent at its conclusion. This objective will be sought through the achievement of growth rates higher than those targeted for other economic sectors and for GDP as a whole.

Extensive interrelationships exist between the construction sector, which stands amongst the oldest producing sectors in the Kingdom, and other sectors in the economy. However, other producing sectors, particularly manufacturing industry and agriculture, having developed more recently, are characterized by poor linkages, both among themselves and with other economic sectors.

The extent of cross linkages between sectors within the economic diversification process is a qualitative as well as a quantitative phenomenon, and the Fifth Plan will focus on qualitative aspects. Effective policies will, therefore, be adopted in order to promote linkages among the various sectors of the economy, and, primarily, among the producing sectors.

The importance of developing forward and backward linkages in the producing sectors derives from the fact that growth in these sectors creates a momentum that spreads through the economy and fosters development. The Fifth Plan attributes substantial importance to this factor, so that balanced development among the producing sectors can be achieved.

This chapter discusses the development objectives and policies for the following producing sectors:

- Agriculture
- Industry
- Electricity
- Construction

The chapter also discusses the key issues that have emerged during the implementation process of the Fourth Plan, and which should be resolved through specific programs and policy measures during the Fifth Plan.
10.1 AGRICULTURE

10.1.1 Role and Development Objectives

The expansion of agricultural production over the past ten years has been one of the most remarkable successes of the entire development effort in the Kingdom. Contrary to the experience of many developing countries, the importance of establishing a viable agriculture sector that is capable of self-sustained growth over the long term, was recognized early in the Kingdom’s development planning process. The private sector has responded positively to the range of support measures introduced by the government.

Agriculture has played a leading role in the national development strategy through its contributions to:

- the diversification of the Saudi economy and a reduced dependence on oil as the prime source of national income;

- the achievement of higher growth rates in other sectors of the economy, through the expansion of forward and backward linkages with other sectors, such as food processing industries, manufacturing of agricultural inputs and other agricultural services.

- combatting desertification and enhancing environmental equilibrium;

- raising the income level and welfare of rural inhabitants, thereby minimizing migration to the urban areas, and contributing to the achievement of regional population balance.

Agriculture will continue to play a vital role in the development process, particularly with the expected increase in the output of fisheries, in which the Kingdom possesses promising resources and has a comparative advantage. The following major objectives will guide the development of the agricultural sector during the Fifth Plan:

- To contribute to the security of the nation’s food supply, through the diversified production of cereal, vegetable, animal and fish products, and commodities that are appropriate to the Kingdom’s available natural resources and subject to the optimum long term use of water;

- To achieve satisfactory growth in yields for major farm products, so as to minimize costs and lower water consumption per unit of output;

- To achieve a satisfactory rate of growth in agricultural labor productivity;
- To make a significant contribution to the creation of job opportunities for rural citizens, and to improve their welfare;

- To attain a high level of efficiency in production and marketing throughout the sector.

10.1.2 Achievements and Key Issues

During the Fourth Plan period, value added in agriculture grew at the high average annual rate of 13.8 percent, compared to 8.7 percent during the Third Plan and the target rate of 6 percent for the Fourth Plan. As a result, agriculture’s share of GDP increased from 3.4 percent in 1404/05 to 8 percent by the end of the Fourth Plan, while its share of non-oil GDP amounted to 10.4 percent in 1409/10. Significant employment opportunities were created in the sector, as total manpower increased from 538,000 in 1404/05 to 569,000 in 1409/10. Major output gains were recorded in wheat and poultry production, which rose at average annual rates of 15 percent and 18 percent respectively during the first three years of the Fourth Plan. Production costs per ton declined significantly for some crops, such as wheat, barley and vegetables grown in greenhouses. The average yield per hectare for several crops increased at rates exceeding 3 percent per annum. In 1408/09, wheat production exceeded domestic demand by 2.5 million tons, and the surplus in egg production reached 33,000 tons, while exports of dates amounted to about 26,000 tons. Rapid growth of domestic animal output, particularly in white meats, red meats and milk (including powdered milk) have led to an increase in self sufficiency rates, which in 1408/09 reached 75 percent, 72 percent and 73 percent respectively, of total demand (see Figure 10.1). Full self sufficiency was achieved in the production of fresh milk. Fish production has also increased from 46,000 tons in 1404/05 to 53,000 tons in 1408/09.

These achievements were made possible by the system of price support administered through the Grain Silos and Flour Mills Organization (GSFMO), and by the efforts of the Ministry of Agriculture and Water (MOAW). During the Fourth Plan, the MOAW evaluated and provided licenses to 3,267 agricultural projects; distributed over 1.2 million seedlings to improve vegetable, fruit and date production; and provided free crop protection for half a million hectares per year. In addition, the MOAW has implemented effective extension and research programs, which contributed significantly to the production increase.

Notwithstanding these positive achievements, the rapid expansion of agricultural output has itself led to a number of structural problems which will require specific policy attention during the Fifth Plan.

Spatial Expansion and Demand for Limited Water Resources

Over 1.1 million hectares of agricultural land were distributed through the Arable Land Distribution Scheme during the period 1400-1408. The rate at which this land was being allocated increased in recent years, so that of this total, about 0.5 million hectares were distributed
during the first three years of the Fourth Development Plan. This brought the total holdings of agricultural land to 3.1 million hectares by the end of 1408, one third of which was under crops.

With the exception of the South-Western region, the Kingdom has an arid climate and very low rainfall. Thus, the potential for renewable surface water supply is very limited. With the rapid expansion in farm holdings, large-scale agricultural projects have relied primarily on water supplies from non-renewable underground aquifers, which provided over 80 percent of the agricultural sector’s water requirements. The demand for underground aquifers’ water supplies has increased enormously over the past ten years. In 1407, agriculture consumed 14 billion cubic meters, about 90 percent of the total water demand in the Kingdom. Water consumption by wheat was estimated at 5.3 billion cubic meters, or 37 percent of agriculture’s total water demand in the same year (Figure 10.2). This rate of water consumption is extremely high relative to the Kingdom’s long term potential supply of non-renewable groundwater.

Further large scale spatial expansion of agriculture would lead to a critical imbalance between water demand and sustainable water supply, which might negatively affect the role of agriculture in the long term. Agriculture is generally thought of as an infinite activity with permanently renewable annual cropping patterns.

Relative Prices of Farm Commodities, Crop Patterns and Diversification of Agricultural Production

The government’s price support for wheat has led to a significant increase in its production, and has positively contributed to the establishment of farm-related infrastructure and the application of modern agricultural technologies. However, it has had an adverse effect on the production of other crops because of the change caused in their relative prices. This led to a rapid increase in the total area devoted to wheat, which reached 602,000 hectares in 1407/08, or about 53 percent of the total cropped area in the same year (see Figure 10.3). Thus, the increase in agricultural output has become quite dependent on a single crop. This trend is incompatible with the expected growth in demand for basic food items and the structure of food demand (as shown in Table 10.1). The demand for vegetables and fruit is expected to grow at average annual rates of 4.6 percent and 4.3 percent respectively during the Fifth Plan period, compared to 1.9 percent for wheat. The demand for white meat and eggs is projected to grow at even higher rates.

There is a need, therefore, to diversify agricultural production to satisfy the local demand for various commodities. This entails the revision of support prices and the establishment of a more comprehensive crop pattern which, at the same time, is compatible with the Kingdom’s natural resources, secures an acceptable rate of return for producers and provides a balanced selection of agricultural commodities (both vegetable and animal products) for consumers, and which conforms to the growth and expected structure of demand for basic food items (Table 10.1).
Figure 10.1

Self-Sufficiency Ratios in Selected Food Items 1408/09

Red Meat
White Meat
Milk*
Vegetables
Fruits
Fish

0% 25% 50% 75% 100%

Local Production Import

* Includes powder milk
Figure 10.2

Percentage Shares of Water Consumption by Major Crops (1407)

- Wheat 37%
- Other Grains 7%
- Clover 8%
- Other Fodders 16%
- Vegetables 10%
- Dates 14%
- Fruits 3%
- Permanent Crops 5%
Figure 10.3

Crop Pattern and Acreage Allocation in 1407 (thousand hectares)

- WHEAT 602
- PERMANENT CROPS 67.5
- OTHER GRAINS 111
- DATES 64
- CLOVER 48
- FRUITS 18
- OTHER FODDERS 115
- VEGETABLES 99
Within the context of diversifying the agricultural production base, the fisheries sector enjoys considerable growth potential, as the Kingdom’s coastline stretches 2520 kilometers along the Red Sea and the Arabian Gulf. Fish resources available within the territorial waters of the Kingdom are estimated at over 500,000 tons per year. However, the catch in 1407/1408 amounted to a mere 10 percent of total resources available. An expansion in fish production will provide high nutrient value to domestic consumers, and open the potential for exports, thus contributing to an improvement in the Kingdom’s trade balance.

### TABLE 10.1

**Projected Demand for Basic Food Items**

(1000 Tons)

<table>
<thead>
<tr>
<th></th>
<th>1409/10</th>
<th>1414/15</th>
<th>Average Annual Growth (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>1175</td>
<td>1291</td>
<td>1.9</td>
</tr>
<tr>
<td>Red Meat</td>
<td>243</td>
<td>297</td>
<td>4.1</td>
</tr>
<tr>
<td>White Meat</td>
<td>450</td>
<td>586</td>
<td>5.4</td>
</tr>
<tr>
<td>Eggs</td>
<td>110</td>
<td>144</td>
<td>5.5</td>
</tr>
<tr>
<td>Milk</td>
<td>640</td>
<td>770</td>
<td>3.8</td>
</tr>
<tr>
<td>Vegetables</td>
<td>1251</td>
<td>1569</td>
<td>4.6</td>
</tr>
<tr>
<td>Fruits</td>
<td>1207</td>
<td>1491</td>
<td>4.3</td>
</tr>
<tr>
<td>Fish</td>
<td>91</td>
<td>111</td>
<td>4.1</td>
</tr>
</tbody>
</table>

### Agricultural Loan Structure

The impressive achievements in agriculture have been greatly assisted through the provision of loans from the Saudi Arabian Agricultural Bank (SAAB). Since the beginning of the Third Plan, medium term (10 year) loans were oriented towards investment in equipment such as farm machinery, irrigation equipment and water pumps, or activities such as well drilling.
and casing. Short term loans to finance seasonal production inputs comprise less than one per-
cent of total loan value.

The emphasis on medium term investment loans was wholly appropriate in the early stages
of development in the agricultural sector, when farms lacked sufficient infrastructure and ad-
vanced mechanization capabilities. As infrastructure has now been completed for most farm
projects, the demand for loans has naturally shifted to short term production-related financing
for annual seasonal requirements. However, the supply of short term loans is not responding
to all agricultural needs. The lack of sufficient liquidity for financing production activities may
now prevent the full utilization of existing productive capacity in agriculture.

The provision of short term (one year) loans to a larger number of farmers and the sub-
sequent collection procedures require a high level of operational efficiency from any lending
institution. In this regard, the Saudi Arabian Agricultural Bank has well trained manpower
resources, 93 percent of whom are Saudi nationals. It has over 70 branches spread throughout
the entire Kingdom and is equipped with the most advanced facilities. It is, therefore, capable
of handling a larger number of short-term loans during the Fifth Plan period.

**Gap between Natural Domestic Endowments and Demand for Animal Products**

The demand for red and white meats, milk and other animal products is related to in-
come levels and is expected to grow at a higher rate than population for years to come. However,
the Kingdom's limited domestic base for animal feed supply is not commensurate with the ex-
pected growth in animal production.

The Kingdom's output from grazing is limited as a result of the predominantly dry en-
vironment. Total grazing land in the Kingdom is 171 million hectares, of which only 5 percent
is top grade, and 10 percent is classified as good land. Available output from grazing is esti-

mated at about 7.5 million tons of dry material, which would be sufficient for 1.7 million animals
(sheep equivalent).

In 1409, the annual demand for barley as animal feed was estimated at about 4.3 million
tons, with an animal population equivalent to around 22 million sheep, and which is expected
to grow by 6 percent annually. Domestic production of barley -- estimated at 280,000 tons
-- meets only a small part of this demand, the balance having to be imported.

The government's price support for barley, at SR 1 per kg, has two related purposes: to
decrease the area devoted to wheat production, and to induce higher domestic production of
barley. Although the guaranteed price for wheat has been reduced from SR 3.5 to SR 2
or SR 1.5 per kg (for farmers and agricultural companies respectively), the increase in barley
production has not matched that of wheat. Financial returns are still higher in wheat than in
barley. Thus, if the objective to partially replace wheat with barley production for animal feed
is to be successful, price support policies must be kept under constant review. In addition, such a review must also consider the implications of basing an expansion in animal production on imported raw materials and feeds.

**Local Products and Foreign Competition**

The domestic production of some agricultural products is adversely affected by a number of factors, such as the absence of tariffs that may discourage cheap imports, and the lack of efficient marketing channels. The severity of competition varies by commodity, but mainly affects vegetables. The introduction of tariff protection on a general scale might be seen as contrary to the Kingdom's fundamental support for free trade. However, tariffs can be justified in cases of dumping, which is an unfair trading practice. Regional cooperation in agricultural trade should be strengthened among Arab countries, with due consideration to the interests of domestic producers.

**10.1.3 Role of Government and the Private Sector**

The government will continue to play an important role in agricultural development in the Kingdom, through the implementation of a wide range of programs, which will include agricultural services, research, support for the application of optimum agricultural management methods, development of appropriate technologies and provision of necessary agricultural credit facilities. In addition, government price support for some commodities will continue to encourage improved crop patterns and increases in production. Joint venture operations with the private sector will be undertaken only when deemed necessary. The private sector will be encouraged to engage in activities that are now undertaken by the government, and the government will gradually reduce its share in the equity of the National Agricultural Development Company (NADEC) and the Saudi Fisheries Company. The private sector will assume a primary role in production, investment and the application of modern and appropriate technology.

**10.1.4 Sectoral Policies and Main Programs**

**Sectoral Policies**

The following policies will be implemented in the agriculture sector during the Fifth Plan:

- Distribute land only in areas with high-potential renewable water resources; areas with critical ground water depletion rates will be identified and regulations introduced on appropriate water pumping rates and the areas to be cultivated;

- Provide agricultural inputs and support services to farmers, including agricultural extension services and the distribution of seeds and seedlings; improve marketing channels for small farmers by providing storage facilities for crops such as potatoes and other perishable vegetables; and study methods to promote private marketing channels;
- Provide training for agricultural manpower to develop and enhance their skills in various specializations;

- Encourage the cultivation of new feasible crops, including oil-bearing ones (such as sunflower and corn), the production of vegetables in greenhouses, and increased fishing, while using tariffs to protect domestic producers against dumping by foreign competitors when necessary;

- Continue to support research on problems specific to the Kingdom's agriculture, aiming at the application of appropriate modern technology;

- Continue data collection and the dissemination of information about agricultural resources, prices, production and costs of various agricultural commodities;

- Regularly review agricultural support prices to promote optimum cropping patterns and the prudent diversification of agricultural production;

- Provide a sufficient volume of short-term loans for agricultural production;

- Encourage the private sector to establish animal feed plants using imported raw materials, in order to attain a prudent level of meat production at a relatively competitive cost and with the optimum use of local raw materials;

- Conduct joint studies with GCC member countries to promote inter-regional cooperation in the production, storage and marketing of the main food items, including fish products, and implement feasible related ventures.

Main Programs
The following major programs will constitute a coherent framework for the implementation of development policies in agriculture.

Agricultural Services
This program will provide agricultural extension services, improved seeds, animal vaccines and quarantine services.

Agricultural Development
This program aims at the development of range management and forestry, and the establishment and operation of irrigation and drainage facilities to assist small farmers.
Agricultural Research
This program is aimed at improving crop and livestock production, range management, forestry and fisheries.

Agricultural Credit and Subsidies
This program aims at the establishment of farm infrastructure and increasing agricultural output. It provides interest-free loans for investment and the production process. Subsidies are provided for the purchase of farm machinery and equipment.

Economic Studies and Statistics
This program aims at the collection and updating of data and information related to agricultural production, marketing, and socioeconomic studies pertinent to farmers. It includes surveys of animal, fishery, and forestry resources, as well as a comprehensive agricultural census carried out at 10 year intervals.

Grain Silos and Animal Feed Plants
This program aims at maintaining a suitable grain storage capacity, including a strategic reserve equivalent to six months’ consumption. The program also includes the purchase and storage of raw materials for animal feed plants.

Technical Cooperation and Technology Transfer
This program is intended to increase the efficiency and improve the performance of the agricultural sector through the utilization of advanced science and technology, in cooperation with international and regional specialized organizations.

10.1.5 Fifth Plan Targets

The targeted average annual real growth rate for the agriculture sector’s value added during the Fifth Plan period is 7 percent, which is more than twice the targeted growth rate for the entire economy. Agriculture’s share of GDP is expected to reach 9 percent by 1414/15.

A decline in wheat production is expected, due to its partial replacement by barley. The local production of red meat, white meat, milk, vegetables, fruit and fish is projected to grow at rates within the range of 4 to 8 percent per year on average. The targeted production for some basic food items during the Fifth Plan is shown in Table 10.2. Targeted investment to be financed by medium term loans from the Saudi Arabian Agricultural Bank, will total SR 6.9 billion.
**TABLE 10.2**

Targeted Production of Basic Food Items

(*000 Tons*)

<table>
<thead>
<tr>
<th></th>
<th>1409/10</th>
<th>1414/15</th>
<th>Average Annual Growth (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>3718</td>
<td>2600</td>
<td>(6.9)</td>
</tr>
<tr>
<td>Red Meat</td>
<td>178</td>
<td>216</td>
<td>3.9</td>
</tr>
<tr>
<td>White Meat</td>
<td>326</td>
<td>436</td>
<td>6.0</td>
</tr>
<tr>
<td>Eggs</td>
<td>143</td>
<td>150</td>
<td>1.0</td>
</tr>
<tr>
<td>Milk</td>
<td>479</td>
<td>583</td>
<td>4.0</td>
</tr>
<tr>
<td>Vegetables*</td>
<td>942</td>
<td>1261</td>
<td>6.0</td>
</tr>
<tr>
<td>Fruit</td>
<td>890</td>
<td>1103</td>
<td>4.4</td>
</tr>
<tr>
<td>Fish</td>
<td>57</td>
<td>84</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* excluding watermelons and musk melons

10.1.6 Financial Allocations: Agriculture

The financial allocations for the agricultural sector during the Fifth Plan are shown in Table 10.3.
TABLE 10.3

Fifth Plan Financial Allocations: Agriculture Sector
(SR million)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Salaries and Supplies</th>
<th>Operation and Maintenance</th>
<th>Projects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Agriculture and Water (Ag. Affairs)</td>
<td>3,010</td>
<td>685</td>
<td>524</td>
<td>4,219</td>
</tr>
<tr>
<td>National Commission for Wildlife Conservation and Development</td>
<td>100</td>
<td>90</td>
<td>26</td>
<td>216</td>
</tr>
<tr>
<td>Saudi Arabian Agricultural Bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure</td>
<td>726</td>
<td>24</td>
<td>100</td>
<td>850</td>
</tr>
<tr>
<td>Loans</td>
<td>—</td>
<td>—</td>
<td>6,900</td>
<td>6,900</td>
</tr>
<tr>
<td>Grain Silos and Flour Mills Organization</td>
<td>377</td>
<td>1,175</td>
<td>674</td>
<td>2,226</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,213</strong></td>
<td><strong>1,974</strong></td>
<td><strong>8,224</strong></td>
<td><strong>14,411</strong></td>
</tr>
</tbody>
</table>

10.2 INDUSTRIAL SECTOR

10.2.1 Role and Development Objectives

Industrial development is a key component of the economic development strategy of Saudi Arabia, contributing to the achievement of some of the most important of the strategy’s objectives: higher GDP growth rates; the diversification and expansion of the production base; the development of non-oil sources of income; the achievement of an adequate level of self-sufficiency; the transfer of modern technology contributing to increased production efficiency; the generation of job opportunities beyond traditional occupations; and, finally, the development of a balanced economy that can weather world economic fluctuations. Industry has developed in line with the nature of the Kingdom’s resources and needs, focusing on manufacturing activities related to the transformation of oil and oil derivatives, for which Saudi Arabia enjoys a comparative advantage. The development of non-oil manufacturing with import substitution or export potential has also been pursued. As a result, the Kingdom has evolved from being a producer and exporter of raw materials, to having technologically advanced industries, as well as the capability to develop them further.
At the onset of the Fifth Plan, the industrial sector displays confidence and trust in the clear-cut principles of the industrial development strategy, under which the industrial sector has grown with clear specifications. Petrochemical industries generate about 22 percent of total manufacturing value added; petroleum refining accounts for 40 percent; while other manufacturing industries (which include consumer products, chemicals, cement, building materials, engineering products, etc.) account for the remaining 38 percent. The industrial sector employs about 6.4 percent of the total labor force.

Within the context of continued endeavors to strengthen the foundation of the economic base, industrial development will pursue the following major objectives:

- To maximize the domestic transformation of domestically produced raw materials and intermediate products, particularly oil derivatives and petrochemicals;

- To encourage import substitution industries whenever it is economic to do so, in order to achieve a reasonable level of self sufficiency;

- To encourage export-oriented industries which have a comparative advantage, and to provide adequate means and incentives required for their development;

- To achieve integration and inter-linkages among activities in the industrial as well as other economic sectors;

- To improve labor productivity in the industrial sector;

- To strengthen industrial cooperation among the Gulf countries and develop joint GCC industrial projects, within the framework of the joint economic agreement and the joint industrial strategy of the GCC;

- To strengthen industrial cooperation between the Kingdom and Arab and Islamic countries, and promote the Kingdom’s role in joint Arab and Islamic industrial projects;

- To develop industrial cooperation with foreign countries for the prudent and well studied transfer of technology, and to attract foreign capital.

10.2.2 Achievements and Key Issues

The Kingdom's industrial sector was targeted for an average growth rate of 15.5 percent during the Fourth Plan. If petrochemical industries are excluded, the targeted growth rate was 10.5 percent. It was also expected that the share of the industrial sector would reach about
7.5 percent of GDP, in constant 1399/1400 prices, by the end of 1409/10. Instead, a growth rate of 3.9 percent was achieved in constant prices, while industry’s share in non-oil GDP amounted to 11.4 percent in 1409/10 in current prices. Growth was primarily attributable to refining and petrochemical industries, which accounted for about 55 percent of total industrial investment. Other non-oil manufacturing industries accounted for 5.7 percent of non-oil GDP in 1404/05, and 4.3 percent in 1409/10.

The Saudi Basic Industries Corporation (SABIC) has brought seven new petrochemical plants into operation. An additional 264 plants in other manufacturing industries were constructed, and oil refineries were operated at full capacity.

The Kingdom’s exports of petrochemical products rose from SR 816 million to over SR 10 billion. Exports of refined oil products increased from 15 to 39 million tons, and exports of other manufacturing industries’ products increased from SR 387 million to SR 3,612 million, between 1404/05 and 1408/09. 2058 industrial loans were disbursed during the Fourth Plan period.

Infrastructure projects were completed at the two industrial cities at Jubail and Yanbu, which are now fully ready to accommodate new industrial investment. A total of 78 plants are now in operation in Jubail, and 29 plants at Yanbu. Projects for other industrial cities were completed, bringing to eight the total number of developed industrial zones, encompassing an area of 32 million square meters.

The Kingdom’s oil refining industry has undergone comprehensive re-organization during the Fourth Plan. Most refining and distribution activities have been regrouped under the Saudi Arabian Marketing and Refining Company (SAMAREC), which is responsible for the operation, management and marketing of refined oil products.

New industrial investment companies were established and four projects were initiated under the Peace Shield Offset Program.

**Key Issues**
Several issues arose from local, regional and international economic developments, which hinder industrial growth, including the following:

**Basic Petrochemical Industries**
The Kingdom’s basic petrochemical industry has succeeded in gaining access to world markets, despite the obstacles that were met at its initial stage of development, in the form of limited national expertise in international marketing, and other obstacles at the international level. In light of the fact that the main markets for petrochemical products are in the industrialized countries, competition among producers of petrochemicals will grow more intense in the
near future. Competition will also increase as a result of changing economic relations between Eastern and Western Europe, and the unification of European Community markets by the end of 1992. The impact of these imminent changes on the expected basic petrochemicals supply/demand equilibrium will be considerable. As a result, measures will have to be adopted to identify and pursue new marketing opportunities, develop marketing skills, complete basic petrochemical projects selected on the basis of world demand forecasts, and revise the pricing policy for raw materials and intermediate products, in line with the priority attributed to domestic transformation.

**Downstream Petrochemical Industries**

The comparative advantage and accumulated technical and marketing expertise in petrochemicals, place the Kingdom in a favorable position to pursue further downstream development, thus placing this sector at the center of the industrialization process. The next stage, therefore, requires that special attention be given to promoting downstream petrochemical transformation, so that proper utilization may be made of relevant world technological research findings which have considerably enlarged the scope of the petrochemical industries. The development of downstream petrochemicals will be a another step forward in the series of successes achieved by the Kingdom within the context of global cooperation in petrochemicals.

**Import Substitution Industries**

Significant progress was made in expanding import substitution industries, mostly based on domestic raw materials, and benefiting from low transportation costs. The latter provided a competitive advantage that helped industry in successfully meeting the challenge of local and regional competition. Unfair trading practices, especially dumping, have emerged. These are against free trade principles, and have reduced the utilization of installed production capacity. On the other hand, several investment opportunities still exist in import substituting industries, and a revision of trade policies and laws is required, as appropriate to achieve the optimum balance between the needs of local industry and Saudi consumers, and to combat and eliminate unfair trading practices. National private capital as well as foreign capital will continue to be oriented towards investment in import-substituting industries.

**Export Industries**

The Kingdom’s petrochemical and metallurgical industries enjoy competitiveness in foreign markets because of their comparative advantage. The Kingdom maintains special relations with other Arab and Islamic countries. The latter constitute potential markets for Saudi export-oriented industries benefiting from the availability of inexpensive energy and the lower investment costs. Appropriate measures must therefore be taken in order to encourage export-oriented industries to compete in the markets of the Arab and Islamic countries.
Advanced Technology Industries

Although economic returns should govern the direction of industrial development, strategic considerations sometimes pertain and necessitate departing from this rule. Great emphasis has been given by the government to technology transfer projects despite the lower relative advantage involved therein. In this respect, the government has pursued the formation of joint ventures within the Economic Offset Program, through which high technology projects will be implemented. Dealing with industrial projects of strategic significance requires that technical manpower be prepared and trained; that laws and regulations be issued; and that institutions be developed, which will contribute to the attainment of the strategic objectives and, in the meantime, conform to the Kingdom’s social development needs.

Small-Scale Industries

Small-scale manufacturing projects with share capital of less than SR 1 million form a dynamic part of the Saudi industrial sector. However, under existing laws and regulations governing the industrial sector, such projects do not require an industrial license and, as such, are not eligible for the range of incentives and benefits available to the industrial sector. The small-scale industries present several problems, such as the large employment of foreign workers, and lower productivity and technology levels. Also, there is no single government department which has responsibility for developing and regulating small-scale industries. Accordingly, there is a need to evaluate the existing conditions of small-scale industries and develop laws and regulations enhancing their contribution to the Kingdom’s economy.

Industrial Pollution

Industrial development is closely associated with industrial pollution, which in turn has an adverse impact on resources for future development. In order to prevent the damage produced by industrial pollution over the longer term, the continuity of industrial development will require that measures be taken to ensure the protection of the micro-environment, and to establish specifications for technologies to be transferred to the Kingdom.

Industrial Incentives

Incentives and support schemes provided by the government, and particularly industrial loans, effectively contributed to the development of the industrial sector. In order to maintain the effectiveness of the incentive system, the next stage of development, (marked by the targeted rationalization of government expenditure and limited industrialization opportunities), will require an extensive review of incentives provided to the private sector, in order to ascertain their effectiveness in realizing the targeted industrial growth rates, and the extent of their conformity with the Fifth Plan general objectives and strategic principles.

Industrial Technology

The industrialization process will be characterized by the continuing transfer of modern technology under technical agreements necessitated by the monopolistic nature of the technology
market. In order to avoid technological and economic dependence, the next stage will require that national capabilities be acquired to deal with modern technology from both the technical and the legal point of view, and to develop technologies that are more appropriate to the economic and social conditions of Saudi Arabia.

**Joint GCC Industrial Projects**

GCC member countries have made significant progress in industrial cooperation within the framework of the joint economic agreements and the joint industrial strategy. In this respect, several laws and regulations governing industrial relations among GCC member states have been standardized. However, the next stage will require more effective thrusts toward the standardization of specifications, in order to accelerate the establishment of joint GCC industrial projects, avoid harmful competition among the member states, and improve access to the expertise gained through the transfer of technology and to savings connected to a larger scale of production.

**Utilization of Existing Plant Capacity**

Several industrial enterprises have now been in operation for 10 to 15 years. The next stage of development requires that attention be paid to existing as well as to new enterprises, in order to identify their needs and determine the appropriateness of their production capacity to new economic conditions. Where deemed effective, measures should also be studied to encourage the consolidation of smaller enterprises into larger and more competitive units.

**10.2.3 The Role of the Government and the Private Sector**

The government has continued in its traditional role aimed at enhancing the industrial development process. Among the achievements in this respect are the completion of the infrastructure in the twin industrial cities of Jubail and Yanbu; the construction, expansion and development of the industrial cities; extension of interest-free loans and other incentives; the enforcement of the exemption from customs duty of imported inputs used in domestic production, as set forth in laws and regulations and in conformity to free trade principles; the continued granting of preference to national products in government procurement; and the assistance given to the private sector in identifying foreign firms wishing to participate in high technology joint venture projects.

Against this background, the Ministry of Industry and Electricity will continue to provide infrastructure in industrial cities and to issue the required licences. The Royal Commission for Jubail and Yanbu will follow up the operation and maintenance and complete the infrastructure in both industrial cities. It will also acquaint potential investors, both in the Kingdom and internationally, with the advantages available to projects of various size and in different sectors in both cities. The Saudi Consulting House will continue to prepare investment opportunity files as well as feasibility and technical studies for industrial projects. The Saudi Industrial Development Fund will continue to extend industrial credit facilities.
The private sector has benefited from the support and encouragement provided by the government, the favorable investment climate and the abundant financial resources available for industrial investment. This was manifested by the increased private sector participation in establishing manufacturing enterprises in line with domestic demand and export opportunities.

The structure of the industrial sector will undergo radical changes during the Fifth Plan. The government will gradually move away from direct investment in manufacturing, and leave it to the private sector. This move reflects the government's policy of refraining from investing in industrial projects, except for projects that have security or strategic implications, or in which the private sector is not interested to invest. At the same time, this move is also in line with the progress of the private sector's financial and managerial capabilities and efficiency, which it has acquired through experience in industrial investment. During the Fifth Plan, investment opportunities will be made available to the private sector in basic and downstream petrochemical projects, in petroleum refining and in projects within the Offset Program. The private sector will be required to enhance its capabilities in planning, coordination, manpower training, and marketing both domestically and abroad.

10.2.4 Sectoral Policies and Main Programs

The following main policies have been established to attain the industrial development objectives of the Fifth Plan:

- Conduct a comprehensive review of institutional policies, administrative measures, incentives, lending policies, licensing and duty exemptions, in order to increase investment opportunities at national and GCC levels, within the framework of the joint industrial strategy of the GCC;

- Encourage a balanced diversification of industrial activities, stressing horizontal and vertical expansion in petrochemicals, as well as in industries which are linked to other economic sectors;

- Continue to encourage foreign capital participation and the utilization of modern technology in industrial projects, in order to benefit from foreign expertise;

- Encourage Saudi industries to develop their own industrial research capabilities;

- Pursue the Economic Offset program;

- Utilize technical services provided by international organizations;
- Continue to provide the required infrastructure in the twin industrial cities of Jubail and Yanbu as well as in other industrial cities;

- Improve the quality of statistical information and analysis, establish economic indicators, and conduct industrial surveys in line with the needs of the Kingdom’s industrial sector;

- Continue to develop national industrial manpower;

- Provide export credit;

- Continue to encourage import substitution and export oriented industries, particularly industries that use domestic inputs, achieve high value added per worker, and can compete in international markets.

**Main Programs**

The government will implement the following major programs:

**Infrastructure**

This program aims at the completion of infrastructure and the provision of services and utilities in the existing industrial cities, as well as the construction of new industrial cities in Al Madina Al Munawarah, Asir, Hail, Jizan, Tabuk, and Najran. It also covers expansion of the industrial cities in Riyadh, Jeddah, Damnam and Qassim. The Royal Commission for Jubail and Yanbu will expand social facilities, as well as public works, utilities and services in both industrial cities.

**Manufacturing Industries**

This program is aimed at strengthening existing manufacturing industries by offering credit facilities for expansion, as well as for improvement of performance. It also covers the provision of consultancy services, as well as the promotion of improved technology and modern management techniques.

**Promotion of Industrial Investment**

Under this program, foreign investors from Gulf, Arab and other countries will be acquainted with investment opportunities that are available in import substituting and export-oriented manufacturing industries, through the preparation of an initial investment profile for projects that appear to be feasible.

**Petrochemical Industries**

This program is aimed at completing economic feasibility studies for two projects at the Petrokemya and Yanpet complexes, to enable a variety of hydrocarbons to be cracked into
products that can be used as feedstock for other industries. The program also covers the provision of services to develop petrochemical products in line with changing market conditions and consumer needs. New domestic and export markets for the Kingdom’s petrochemical products will be identified and developed.

**Industrial Research**

The focus of this program will be on generating research and studies, including industrial pollution research, to guide effective decision making and to identify industrial investment opportunities in the Kingdom.

**Export Promotion**

This program is aimed at encouraging export-oriented industries through the provision of export credit, and studies designed to acquaint the industrial sector with foreign markets and international trade systems.

### 10.2.5 Growth Targets During the Fifth Plan

The industrial sector as a whole is expected to grow at an average annual rate of 6.5 percent during the Fifth Plan period, with petrochemicals achieving a growth rate of 8 percent, oil refining 5.4 percent and other manufacturing 7.5 percent.

A total of SR 9.5 billion has been allocated to the financing of industrial projects. Of this total, SR 4.5 billion will be provided by the Saudi Industrial Development Fund, and SR 5 billion will be provided by the Public Investment Fund.

### 10.2.6 Financial Allocations: Industrial Sector

The financial allocations targeted for the industrial sector during the Fifth Development Plan are shown in Table 10.4.
TABLE 10.4

Fifth Plan Financial Allocations: Industrial Sector
(SR million)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Salaries and Supplies</th>
<th>Operation and Maintenance</th>
<th>Projects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Commission for Jubail and Yanbu</td>
<td>262</td>
<td>4,400</td>
<td>398</td>
<td>5,060</td>
</tr>
<tr>
<td>Ministry of Industry and Electricity</td>
<td>285</td>
<td>92</td>
<td>893</td>
<td>1,270</td>
</tr>
<tr>
<td>Saudi Consulting House</td>
<td>184</td>
<td>5</td>
<td>34</td>
<td>223</td>
</tr>
<tr>
<td>Saudi Industrial Development Fund</td>
<td></td>
<td></td>
<td></td>
<td>4,500*</td>
</tr>
<tr>
<td>Public Investment Fund</td>
<td></td>
<td></td>
<td></td>
<td>5,000*</td>
</tr>
</tbody>
</table>

* Note: These figures represent planned levels of lending on the part of the specialized credit institutions, and are financed by repayments, not out of allocations in the government budget.

10.3 ELECTRICITY

10.3.1 Role and Development Objectives

The electricity sector contributes directly to the fulfillment of the Kingdom’s development objectives. It helps in improving the standard of living and the quality of life. It promotes economic growth and productivity by providing a clean and reliable source of energy. Finally, a widely available and reliable electric power supply facilitates the application of modern productivity-enhancing technologies in many economic activities.

Among the main development objectives of the electricity sector are the following:

- the provision of electricity at a suitable technical level to all population and economic centers, in quantities sufficient to meet the increasing needs of the producing sectors, and with special emphasis on those areas with no service as yet;
- the development of the electric power systems, and the management of demand, in a way that will provide the service at the least economic, social and environmental costs;

- the achievement of financially self-sufficient electric utility companies in the medium and long term;

- the contribution to the achievement of economic integration with GCC and other Arab countries through the linking of local distribution networks.

10.3.2 Achievements and Key Issues

During the Fourth Plan period, the provision of electricity services to 677,000 new customers brought the national electrification rate to 92 percent in 1409/10, thereby ensuring solid progress toward the realization of full electrification.

In spite of the economic slowdown which characterized the Fourth Plan period, total electricity consumption rose at an average annual rate of 10.3 percent (or 2 percent on a per-residential customer basis), i.e. well above long term trends. The non-coincident peak demand grew at an average annual rate of 8.6 percent, reaching 11,813.5 megawatts in 1408/09.

The improvement in productivity and operating efficiency has been the most remarkable development during the Fourth Plan. The ratio of customers per employee grew at an average annual rate of 11 percent, from 52 in 1404/05 to 78 in 1408/09. Other indicators have witnessed similar gains. The increase in labor productivity was accompanied by an increase in the share of Saudi nationals in the sector’s workforce, from 43 percent to 52.4 percent of total employment.
TABLE 10.5

Electricity Indicators in the Fourth Plan

<table>
<thead>
<tr>
<th></th>
<th>1404/05 Actual</th>
<th>1408/09 Estimate</th>
<th>1409/10 Estimate</th>
<th>Average Annual Growth (Percent) 1404-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales (Billion Kwh)</td>
<td>36,470.2</td>
<td>53,874.9</td>
<td>57,108.2</td>
<td>10.3</td>
</tr>
<tr>
<td>Total Sales per Residential Customer (Kwh)</td>
<td>26,570.6</td>
<td>28,799.9</td>
<td>28,254.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Peak Demand (MW)</td>
<td>8,503.5</td>
<td>11,813.5</td>
<td>12,465.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Total Customers (1000)</td>
<td>1,584.2</td>
<td>2,152.3</td>
<td>2,261.1</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Notwithstanding these achievements, a number of outstanding issues constrain the development of the electricity sector. These issues need to be properly addressed in the Fifth Plan period.

Key Issues

- **Regional Balance**: The fiscal constraints which characterized the Fourth Plan period have led to undesired deviations from the target of full electrification by the end of the Fourth Plan. The deviation was greatest in the Southern and Northern regions, and certain rural areas of the Western region. Financial and policy measures are needed not only to increase service coverage, but also to induce and sustain further improvements in productivity.

- **Standards and Procedures**: The lack of industry-wide standards and procedures for the various activities of the electricity sector will be a major obstacle in its efforts to improve performance and realize the desired levels of efficiency and financial stability. Furthermore, well defined planning, operations, and service standards are essential for the rational development of the sector.

- **Supervision and Regulation**: The electricity industry in the Kingdom has evolved to a state where some relatively large utilities have achieved a good measure of independence in their financial affairs. This is reflected in the decreasing government subsidy and the increased importance of self-financed investments. This trend is expected to continue as it should, and in turn, the financing role of the government will further decrease. On the other hand, the regulatory and supervisory functions need to be
developed and rationalized, commensurate with the monopolistic nature of the industry, and to protect public interest.

- **Conservation**: The nature of electricity demand in the Kingdom is such that its seasonal as well as daily variations are relatively wide. The national ratio of minimum load to peak load is only about 31 percent and the load factor is about 0.53. Consequently, the utilization of installed capacity is low and any measures designed to improve the load and the capacity utilization factors stand to generate appreciable benefits.

### 10.3.3 Role of the Government and the Private Sector

The Ministry of Industry and Electricity (MIE) is responsible for the regulation of the electric power industry, while the General Electricity Corporation (GEC) represents the government’s equity share in the individual electric utility companies and finances their capital investments. The electric power systems in the Kingdom are managed and operated by four regionally consolidated companies, with six smaller companies and the GEC managing and operating the systems of the Northern Region. The power generated by the electric utilities is supplemented by the net exports of the Saline Water Conversion Corporation (SWCC) from its dual purpose desalination plants.

Consistent with the Kingdom’s commitment to a market economy, the full privatization of the electric utility industry is a desirable goal over the medium to long term, with the role of the government ultimately confined to one of supervision and regulation, as is necessary for a utility and a monopoly. Substantial progress towards this goal is expected during the Fifth Plan. The form of private sector participation will be decided following studies by the responsible agencies, and will be based on each utility’s financial position and its consequences for government obligations.

### 10.3.4 Sectoral Policies and Programs

The objectives of the electricity sector will be realized by adopting a number of policies and implementing the measures and programs necessary to achieve the stated targets and to resolve the issues constraining the sector’s development. The main policies of the Fifth Plan for the electricity sector are:

- Continue emphasis on the speedy provision of service to those areas with no public supply;

- Provide electricity services at a level of quality which strikes an optimal balance between cost and the nature and type of electric load;
- Develop and implement a comprehensive set of standards and procedures on an industry-wide basis, and that aim at improving efficiency of the management, operations, and regulatory functions;

- Define suitable measures and performance criteria for the industry and set related targets for the individual utilities, which would lead to the desired levels of efficiency and self reliance, and through which the regulatory and follow-up functions can best be exercised;

- Adopt an active policy on electricity rates and tariffs, among whose objectives will be the management of demand to improve capacity utilization and induce conservation.

The Fifth Plan activities in the electricity sector are organized into five programs:

**Generation** : This program will provide for the generation capacity required to meet the forecast demand. Installed capacity will be increased by 3,877 MW during the Plan, thus raising the total capacity from 15,746 MW in 1409/10 to 19,623 MW in 1414/15. This capacity does not include that available from the Saline Water Conversion Corporation, whose firm base export capacity is assumed to increase from 2072 MW in 1409/10 to 2135 MW in 1414/15. About 91 percent of these additions are to be steam and combined cycle electric plants, thus raising the share of steam and combined cycle electric capacity to 38.2 percent of the total installed generating capacity in 1414/15.

**Transmission** : This program covers the activities related to the Extra High Voltage (EHV) and the High Voltage (HV) networks through which further interconnections will be implemented in the various regions of the Kingdom.

**Distribution** : This program covers the activities relating to enhancing and expanding the distribution network. About 557,000 new customers will be served during the Fifth Plan period, bringing the total number of customers to 2,818,000 by 1414/15.

**Communication and Control** : This program encompasses all the activities related to the despatch, monitoring and control functions in the power networks, in addition to other communication services needed for the management and operation of the electric utilities.

**Administrative Development** : This program encompasses several support activities, including buildings and offices. It also includes human resource development activities. About 14,325 workers are expected to undergo training of all types during the Plan.
10.3.5 Growth during the Fifth Plan Period

Some of the factors upon which the electricity growth forecast for the Fifth Plan is based are: the national and regional economic outlook for the Plan period and beyond; the Plan expenditure allocations for the sector; and area-specific consumption patterns.

Total electricity consumption is expected to grow at an average annual rate of 5.2 percent during the Fifth Plan, with consumption per residential customer increasing from 28,255 Kwh in 1409/10 to 30,102 Kwh in 1414/1415 (or at an annual average rate of 1.3 percent). The non-coincident peak load in the Kingdom is forecast to grow at an average annual rate of 5.0 percent, from 12,466 MW in 1409/10 to 15,918 MW in 1414/15.

**TABLE 10.6**
Forecast Indicators in the Electricity Sector during the Fifth Plan

<table>
<thead>
<tr>
<th></th>
<th>1409/10</th>
<th>1414/15</th>
<th>Average Annual Growth (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption (billion Kwh)</td>
<td>57.1</td>
<td>73.7</td>
<td>5.2</td>
</tr>
<tr>
<td>Peak Load (MW)</td>
<td>12,465.6</td>
<td>15,918.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Customers (1000)</td>
<td>2,261.1</td>
<td>2,817.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Installed Generation Capacity (MW)*</td>
<td>15,746.1</td>
<td>19,622.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Employment</td>
<td>27,969.0</td>
<td>28,425.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Electricification Rate (%)</td>
<td>92</td>
<td>96</td>
<td>0.9</td>
</tr>
</tbody>
</table>

* Excludes the base power export capacity of SWCC's dual purpose desalination plants, which will reach 2,135 MW by 1414/15.

10.3.6 Financial Allocations: Electricity Sector

The planned government expenditures in the electricity sector during the Fifth Plan are shown in Table 10.7.
TABLE 10.7

Fifth Plan Financial Allocations: Electricity Sector *
(SR million)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Salaries and Supplies</th>
<th>Operation and Maintenance</th>
<th>Projects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electricity Corporation</td>
<td>274.1</td>
<td>678.6</td>
<td>12,562.4</td>
<td>13,515.1</td>
</tr>
</tbody>
</table>

* The Fifth Plan allocations in this table exclude expenditures to be self-financed by the individual utility companies, as well as government direct subsidies to the electricity companies; while allocations of the Deputy Ministry for Electricity Affairs are included in the plan allocation for Ministry of the Industry and Electricity (Industry Affairs).

10.4 CONSTRUCTION

10.4.1 Role and Development Objectives

The construction industry makes a major contribution to economic development through its broad-ranging linkages with other economic activities -- including its direct impact on many of the Kingdom's high value added industries -- and its high levels of employment. In 1409/10, the construction sector had an estimated workforce of 944,000, and this figure is expected to grow to about 960,000 by the end of the Fifth Plan period. The construction sector’s share of non-oil GDP stood at 15.5 percent in 1409/1410, and is expected to grow to 16 percent by the end of the Fifth Plan period.

The major objectives of the construction sector during the Fifth Plan are summarized as follows:

- To re-stimulate the construction sector, thereby increasing its contribution to national income;

- To continue the development and training of national engineering and technical manpower, and to absorb higher numbers of such manpower into the sector;
- To increase the participation of Saudi contractor and Saudi engineering consulting offices in implementing construction and maintenance projects included in the Plan;

- To develop the export capacity of the building materials industry and ensure that government and private projects use domestic building materials.

10.4.2 Achievements and Key Issues

In response to the economic conditions prevailing during the Fourth Plan period, construction activity declined at an average annual rate of 8.2 percent compared to its targeted decline of 2.8 percent. Its share of total employment fell from 28 percent to 16 percent, with an average annual decline of 8.5 percent over the same period.

During the Fourth Plan period, 4,106 housing units were completed throughout the Kingdom. The Deputy Ministry for Public Works supervised 807 construction projects, the design of 47 other projects, and prepared and developed 3,793 fully serviced land plots. In addition, an estimated 46,400 housing units were completed by other government agencies, equivalent to 69 percent of the relevant Fourth Plan target.

By the end of 1408/1409, the Deputy Ministry for Contractor Classification had issued 3,477 new classification certificates to Saudi and non-Saudi contractors, re-classified 927 contractors by type and grade of activity, and issued four comprehensive contractor classification lists.

The Saudi Real Estate Development Fund extended loans for the construction of 87,000 housing units during the Fourth Plan, or about 58 percent of the Fourth Plan target.

Saudi contractors succeeded in increasing their share of government project contracts from 67 percent to 85 percent over the Fourth Plan period. This success can be attributed primarily to two factors:

(i) the enforcement of the ‘thirty percent rule’ which states that at least 30 percent of the construction value of government contracts must be awarded to Saudi construction firms; and

(ii) the requirement to split large government projects into a number of smaller contracts.

Furthermore, Saudi contractors have taken steps to improve efficiency and maintain their viability in a highly competitive and depressed market. Construction and maintenance costs fell sharply between 1403 and 1408 (see Figure 10.4), as the more intense competition forced contractors to reduce wage costs and change the nationality composition of their foreign workforce. At the same time, Saudi contractors made greater use of domestically supplied materials and equipment, and shifted their imports to lower cost sources.
Key Issues
The following issues will need to be addressed in order to stimulate construction activity and increase its contribution to economic growth and development.

Encouragement of Construction Exports
While the quality of output from several building materials factories now conforms to international standards and specifications, these plants currently suffer from low capacity utilization, as a result of the decline in construction activity. The Fifth Plan aims for a revival of construction activity, and in this regard, the expansion of experienced Saudi construction companies into international markets should be promoted on the basis of the special relations that exist between the Kingdom and its neighboring countries. The next stage of development will also require that marketing channels be opened for domestically produced building materials, in order to raise the utilization of existing capacity.

National Manpower
The construction sector has experienced a marked decline in the employment share of Saudi manpower to around 5 percent, particularly amongst engineers, technicians and skilled workers. The next stage requires that the private sector be encouraged to absorb a larger number of Saudis. A comprehensive study will be undertaken to identify the construction sector’s requirements for engineering and technical specialists. In addition, universities and technical institutes will aim to guide secondary school graduates towards the required specializations.

Quality Standards
Efficiency has been impeded by the lack of quality specifications and unified standards for building equipment and materials, by technical measures that are inappropriate for local conditions, and by administrative procedures which sometimes tend to be complicated. Therefore, specifications will have to be completed, and standard criteria established for building materials. Administrative procedures will be made easier, and plant efficiency improved.

Maintenance of Completed Projects
The harsh climatic conditions of the Kingdom and the low quality standards in the early years of development have contributed to the premature ageing of physical stock, and thus to increasing maintenance and replacement needs. Emphasis during the forthcoming stage should, therefore, be laid on stimulating the private sector’s role in construction maintenance.

10.4.3 Role of the Government and the Private Sector
In principle, the role of government in the construction sector is to provide the regulatory framework for a free market environment, by ensuring fair competition between firms on the one hand, and customers’ protection on the other. In addition, the Ministry of Public Works
Figure 10.4

Quarterly Construction Cost Indices
1400 - 1408

1398 third quarter = 100
and Housing has developed a range of support measures for the private sector to enhance quality, to reduce construction costs and to increase the number of Saudi companies operating in this field. The government has traditionally been a major source of demand for the construction industry. The Fifth Plan aims to shift construction demand from the government to the private sector, so that the construction sector may maintain its viability even in the face of reduced government demand for its services. In this regard, the government will aim to stimulate the construction sector through:

- the establishment of a favorable environment for private enterprises, in terms of continuing incentives for private sector investment with a high construction content, such as loans from the Real Estate Development Fund and the Saudi Industrial Development Fund;

- examining the possibility of encouraging public corporations to finance additional investment jointly with the private sector;

- the stabilization and steady expansion of government project expenditure, and sufficient budgetary allocations for the maintenance of existing infrastructure.

The private sector must rely more on its own investment initiatives, rather than depending predominantly on government invitations to tender. Meaningful actions in this regard would include diversification activities, upgrading efficiency, focusing on wider markets, streamlining organizational structures, and exploiting cooperation opportunities through joint ventures.

10.4.4 Sectoral Policies and Main Programs

The following policies will contribute towards the achievement of the development objectives for the construction sector during the Fifth Plan:

- Streamline administrative procedures and develop laws and regulations concerning construction work and activities;

- Issue and enforce unified material standards, and develop and enforce regulations for different types of building, management and operation and cost assessment; undertake laboratory tests of building materials and publish the results;

- Expand the capabilities of the central office for storing public construction documents and data for use in studies and applied research;

- Encourage greater cooperation between the public and private sectors in financing, building, operating and maintaining major projects;
- Support Saudi contractors by ensuring them at least a 30 percent participation in public contract awards: by dividing large projects into smaller contracts if technically and economically feasible; by promoting contractor awareness of the classification system; and by considering the possibility of giving preference to Saudi contractors with a significant proportion of Saudis in their workforce;

- Promote the participation of Saudi contractors in international markets, and emphasize reciprocity within the Kingdom's international aid program.

**Main Programs**

**Studies and Technical Cooperation Program**: This program will upgrade the performance and operation of laboratory tests; develop unified standards for building materials and equipment, and regulations for costing of public sector projects; conduct necessary laboratory tests and meet the needs of all regions; and develop and upgrade the central office as a national archive for public building plans and documents in order to facilitate research and study activities.

**Manpower Development**: This program will upgrade and develop Saudi engineers, technicians, and others in the construction sector workforce. Activity in this area will be undertaken by universities, GOTEVT, the Royal Commission for Jubail and Yanbu and other relevant agencies. The Ministry of Public Works and Housing's central laboratory facilities will be transformed into a training ground for Saudi engineers and technicians.

**Contractor Classification Program**: This program will continue the review and classification of foreign and national contractors; monitor compliance with classification regulations in public sector construction projects; and initiate a new program to classify consultants and experts engaged in construction sector activities.

**10.4.5 Growth Targets During the Fifth Development Plan**

The construction sector is targeted to grow at an average annual rate of 3.8 percent during the Fifth Plan period. The construction sector's employment will remain at 16 percent of total civilian employment, although the number of workers is expected to increase at a moderate average annual rate of 0.3 percent. The assumed growth of the construction sector's value added implies a significant growth in productivity during the Fifth Plan period.

**10.4.6 Financial Allocations: Construction Sector**

The planned government expenditures for the programs of the Deputy Ministry for Public Works and Deputy Ministry for Contractor Classification to support construction sector activities during the Fifth Plan are shown in Table 10.8.
<table>
<thead>
<tr>
<th>Agency</th>
<th>Salaries and Supplies</th>
<th>Operation and Maintenance</th>
<th>Projects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deputy Ministry for Public Works</td>
<td>398.0</td>
<td>67.0</td>
<td>-</td>
<td>465.0</td>
</tr>
<tr>
<td>Deputy Ministry for Contractor Classification</td>
<td>59.0</td>
<td>8.0</td>
<td>-</td>
<td>67.0</td>
</tr>
</tbody>
</table>

* This table does not include allocations for other government construction projects.