

## RURAL HOUSING SCHEME: PRICING OF NEW HOUSES

1. **Cost-based pricing.** To ensure the lowest cost and highest value for money for homes constructed under the government's Rural Housing Scheme (RHS), prices are cost based and exempt from value added tax (VAT).<sup>1</sup> Other government concessions are provided to ensure affordability (see RHS cost containment measures below).
2. **Standard unit costing.** Government regulations apply to cost-based pricing of RHS houses.<sup>2</sup> Architectural design standards for RHS houses are defined by Qishloq Qurilish Loyiha (QQL), a government-owned design institute. QQL has developed 30 RHS house designs, along with a price list for each house design estimated in accordance with standard unit costs published quarterly in the State Committee of Architecture and Construction (SCAC) Price Catalogue. Preparation of detailed design costs is outsourced by QQL to regional design institutes and takes into account site-specific conditions and construction requirements, regionally available construction materials, and a choice of fixtures based on community preferences. The cost of materials supplied by monopoly manufacturers are subject to scrutiny by the State Anti-Monopoly Commission. Unless otherwise justified, higher unit costs or quantities that exceed that specified in the detailed design are not reimbursable. The detailed design cost estimates become the "ceiling price" used for competitive selection of contractors (contractor selection process discussed in supplementary document 18).
3. **Construction costs.** Table 1 provides a detailed breakdown of the main construction costs for 2011 house design model no. TP 184-33c-10, which was chosen by over 60% of the 7,400 RHS 2011 homebuyers. This design is for a 144-square meter (m<sup>2</sup>) 4-room house. The national average of the final construction cost for this model is SUM76.6 million (about \$46,000),<sup>3</sup> with regional estimates ranging between SUM71.2 million (\$42,000) in Karakalpakstan to SUM84.3 million (\$50,000) in Andijan (see Figure 1). On a national basis, construction materials account for 70% of the total construction cost. Regionally, construction materials vary between 68% of total construction costs in Fergana and 72% in Andijan. Nationally, labor accounts for 15% of the total house construction costs, with a regional variation between 11% in Surkhandarya to 17% in Fergana. Labor costs are estimated based on standard coefficients for labor inputs per construction activity. Other contractor expenses (including framing for preparation of foundations, scaffolding, contractor's overhead, etc.) account for 9% nationally, with a regional variation between 6% in Tashkent and 10% in Surkhandarya. Cost per m<sup>2</sup> is in correlation with total square of the house.
4. **Contract price.** The contract price of a new house is based on the final bid of the winning contractor which is generally about 1% below the detailed design cost estimate. Taking into account that the discount offered by contractors is primarily based on labor inputs and other contractor expenses (estimated at 9% and 15%, respectively, of the total national average cost of 2011 houses), the discount is equal to almost 4% of the contractor's main value added to the contract price.

---

<sup>1</sup> With VAT at 20%, RHS prices are 20% below market costs.

<sup>2</sup> See Resolution of the Cabinet of Ministers No. 261 "On Transition to Contract Prices for the Realization of Investment Projects at the Expense of Centralized Capital Investments", 11 June 2003.

<sup>3</sup> \$1 = SUM1,701.39 as of 1 June 2011.

**Table 1: Cost of RHS 2011 House Design TP 184-33c-10, 4-Room House, 144 m<sup>2</sup>**

| <b>Expenditure</b>                                                                                             | <b>National<sup>a</sup><br/>Average Price<br/>(SUM 000's)</b> | <b>National<sup>a</sup><br/>Average %<br/>of Total Cost</b> | <b>Lowest %<br/>By Region<sup>a</sup><br/>of Total<br/>Cost</b> | <b>Highest %<br/>By Region<sup>a</sup><br/>of Total<br/>Cost</b> |
|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|
| Labor                                                                                                          | 11,179                                                        | 15%                                                         | 11%                                                             | 17%                                                              |
| Construction materials                                                                                         | 53,671                                                        | 70%                                                         | 68%                                                             | 72%                                                              |
| Transport of construction materials and removal of waste                                                       | 1,996                                                         | 3%                                                          | 0%                                                              | 4%                                                               |
| Equipment                                                                                                      | 1,885                                                         | 2%                                                          | 2%                                                              | 2%                                                               |
| Use of machinery                                                                                               | 901                                                           | 1%                                                          | 0%                                                              | 3%                                                               |
| Other contractor expenses<br>(Framing for foundation preparation, scaffolding,<br>contractor's overhead, etc.) | 7,119                                                         | 9%                                                          | 6%                                                              | 10%                                                              |
| Other expenses                                                                                                 | 1,284                                                         | 2%                                                          | 2%                                                              | 2%                                                               |
| <b>Total</b>                                                                                                   | <b>76,611</b>                                                 | <b>100%</b>                                                 | <b>100%</b>                                                     | <b>100%</b>                                                      |
| Total Floor Space m <sup>2</sup>                                                                               | 143.6                                                         |                                                             |                                                                 |                                                                  |
| Cost per m <sup>2</sup> (SUM 000's)                                                                            | 534                                                           |                                                             |                                                                 |                                                                  |

<sup>a</sup> Note: National averages and regional comparisons do not include Navoiy Province.

QQI = Qishloq Qurilish Invest; RHS = Rural Housing Scheme

Source: QQI and ADB staff estimates

5. "Other expenses" in Table 1 includes QQI Supervision Fee, other fees for design, surveying, construction quality assurance and inspection, fees for the environmental assessment, and interest. QQI fees and other fees combined account for over 90% of "Other expenses". For each house, QQI fees are equal to 12 times the minimum monthly wage or SUM596,820 (\$350). Other fees for design, surveying, construction quality assurance and inspection, total 12.2 times the minimum monthly wage or SUM606,767 (\$357).<sup>4</sup>

**Table 2: Cost of Construction Materials for RHS 2011 House Design No. TP 184-33c-10, 4-Room House, 144 m<sup>2</sup>**

| <b>Construction Material</b>                            | <b>SUM</b>        | <b>%</b>    |
|---------------------------------------------------------|-------------------|-------------|
| Cement                                                  | 8,181,205         | 18%         |
| Roof                                                    | 5,529,638         | 12%         |
| Wood                                                    | 4,945,525         | 11%         |
| Bricks                                                  | 3,987,000         | 9%          |
| Doors (including entry gate)                            | 3,170,494         | 7%          |
| Manufactured concrete floor slabs                       | 3,150,154         | 7%          |
| Flooring                                                | 2,715,939         | 6%          |
| Reinforced steel framing                                | 1,833,669         | 4%          |
| Installation of heating radiators and pipes             | 1,682,497         | 4%          |
| Windows                                                 | 1,265,152         | 3%          |
| Fixtures and appliances (sink, bath, toilet, gas stove) | 1,158,950         | 3%          |
| Septic tank                                             | 819,315           | 2%          |
| Subtotal of House Construction Materials as Listed      | 38,439,538        | 83%         |
| <b>Total Cost of House Construction Materials</b>       | <b>46,050,584</b> | <b>100%</b> |

Source: QQI

<sup>4</sup> Design fees, national and detailed, are equal to 8 and 0.5% times the minimum monthly wage (or SUM397,880 or SUM24,868, respectively). For surveys (including site inspection), fees are 2.2 times the minimum monthly wage (or SUM109,418). Fees are also charged for construction quality assurance/inspection by the SCAC and QQL, equal to 1.0 and 0.5% times the minimum monthly wage (or SUM47,735 or SUM24,869, respectively). The environmental impact assessment cost is per site and is equal to 1 times the minimum monthly wage (or SUM49,735).

6. **Title transfer and registration fees.** In addition to the contract price for the new RHS house, RHS homebuyers are required to pay a number of fees related to land and building title registration and collateral registration before and after construction of the house. These fees amount to 0.68 times the minimum monthly wage or SUM33,919 (\$20). RHS homebuyers are also required to pay for notarization of land and a collateral registration fee equal to 0.1% of the minimum monthly wage times the price of the mortgage, before and after the construction of the house. Assuming the maximum mortgage loan is approved, the cost of notarization is equal to three times SUM49,735 (\$30).

7. **Price range of RHS house designs.** Twelve of the 30 QQL designs were offered in 2009.<sup>5</sup> Three of the 12 designs were chosen and purchased by 75% of the 847 homebuyers. The most popular design was listed at SUM63.1 million (for a 4-room house with 108.3 m<sup>2</sup> of floor space) (\$38,000) and chosen by 50% of 2009 homebuyers. The second and third most popular designs were listed at SUM39.5 million (for a 3-room house with 87.2 m<sup>2</sup> of floor space) (\$24,000), and SUM65.9 million (for a 4-room house with 128.1 m<sup>2</sup> of floor space) (\$39,000). Each was chosen by 13% and 12% of RHS homebuyers, respectively, that year.

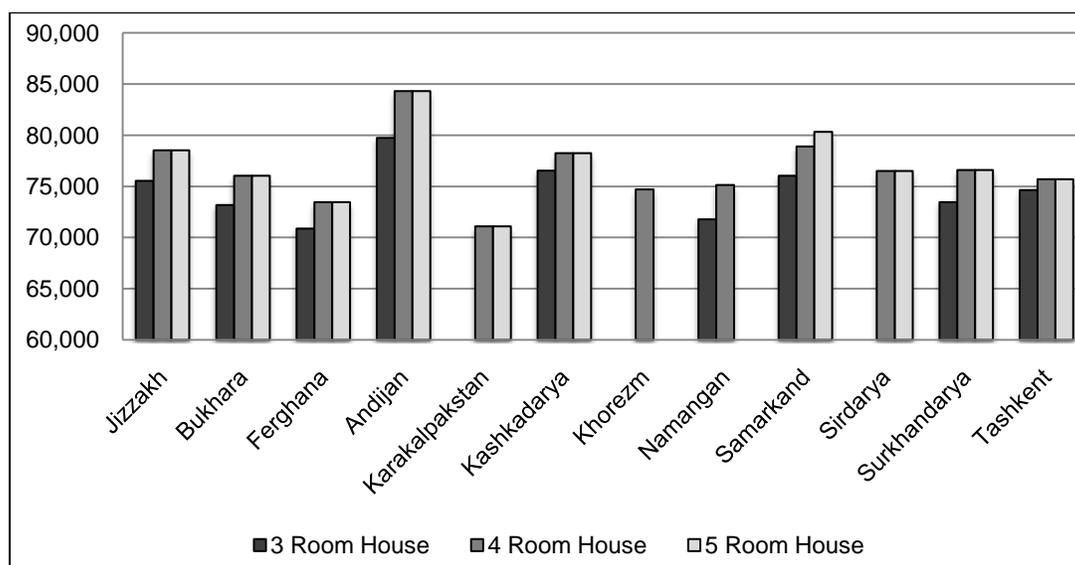
8. Twenty-two designs were offered in 2010.<sup>6</sup> Of these designs, the three most popular were purchased by 57% of RHS homebuyers that year. The most popular design was listed at SUM63.1 million (for a 4-room house with 108.3 m<sup>2</sup> of floor space) (\$38,000) and chosen by 34% of RHS homebuyers. The second and third most popular designs were listed at SUM127.2 million (for a 4-room house with 235.8 m<sup>2</sup> of floor space) (\$75,000), and at SUM67.3 million (for a 4-room house with 128.3 m<sup>2</sup> of floor space) (\$40,000). Each was chosen by 13% and 10% of RHS homebuyers, respectively, that year.

9. For 2011, only the three most popular designs were offered as a single- or a two-storey model. The most popular design was listed at SUM76.1 million (for a 4-room house with 143.6 m<sup>2</sup> of floor space) (\$45,000) and purchased by 64% of RHS homebuyers that year. The second and third most popular designs in 2011 were offered at SUM72.7 million (for a 3-room house with 134.2 m<sup>2</sup> of floor space) (\$43,000) and at SUM88.7 million (for a 5-room house with 182.2 m<sup>2</sup> of floor space) (\$53,000) and were purchased, respectively, by 24% and 12% of RHS homebuyers that year.

10. **Comparison of RHS contract prices by province.** A comparison of the cost of the three RHS house designs offered in 2011 is illustrated in Figure 1. The most popular of the three designs was the 4-room house (143.6 m<sup>2</sup>). The national average cost of this model was SUM76.6 million (\$46,000), with the lowest price at SUM71.1 million (\$42,000) offered in Karakalpakstan, and the highest price at SUM84.3 (\$50,000) offered in Andijan. For the 3-room house (134.2 m<sup>2</sup>), the national average cost was SUM74.6 million (\$44,000), with the lowest price at SUM70.9 million (\$42,000) offered in Fergana, and the highest price at SUM79.8 (\$47,000) offered in Andijan. For the 5-room house (182.2 m<sup>2</sup>), the national average cost was SUM77.1 million (\$46,000), with the lowest price at SUM71.1 million (\$42,000) offered in Karakalpakstan, and the highest price at SUM84.3 (\$50,000) offered in Andijan. On a cost per m<sup>2</sup> basis, the 5-room house is the lowest at SUM479,000 (about \$282) per m<sup>2</sup>, and the 3-room house is the highest at SUM556,000 (about \$327) per m<sup>2</sup>.

<sup>5</sup> The 12 house designs offered in 2009 ranged in price between SUM39.5 million (for a 3-room house with 87.2 m<sup>2</sup> of floor space) and SUM131.8 million (for a 6-room house with 286.3 m<sup>2</sup> of floor space).

<sup>6</sup> The 22 house designs offered in 2010 ranged in price between SUM39.5 million (for a 3-room house with 86.7 m<sup>2</sup> of floor space) and SUM131.8 million (for a 7-room house with 256.1 m<sup>2</sup> of floor space).

**Figure 1: RHS House Construction Costs by Province, 2011**

Source: QQI

11. **RHS cost containment measures.** Construction costs of RHS housing are closely monitored.<sup>7</sup> A number of cost-containment measures have been adopted to ensure affordability. To contain the cost of construction materials, primarily in the peak construction period, 12 brick factories (one in each region) and a door, window and roofing factory has been established by QQI. RHS contractors may purchase at wholesale prices from local suppliers or from QQI factories (with the main cost variable being the cost of transportation). Table 3 compares market prices in peak construction season and highlights cost containment as a result of lower QQI prices. The national average cost savings is estimated at 62% for bricks, 29% for doors, and 32% for roofs. These items in total account for 28% of the total cost of construction materials (see Table 2 above). Thus, cost savings on these three items alone reduce the total cost of construction materials by 23%, and the total cost of the construction of the house by 15%.

12. All contractors engaged under the RHS are exempt from all taxes and mandatory contributions to state funds (except the Pension Fund).<sup>8</sup> Tax concessions are offered to QQB and QQI, and similar tax concessions will be offered to other banks and developers that join the RHS. These cost-containment measures, which account for cost savings of at least one-third of the market value of construction costs, enable construction costs per m<sup>2</sup> to be maintained at 2009 levels, even with improvements in design and construction materials used and general price increases due to inflation.

<sup>7</sup> An independent technical-financial performance audit and value for money assessment will be undertaken in October 2011 and annually thereafter.

<sup>8</sup> Presidential Resolution PP-1051, "On Additional Measures to Stimulate Expansion of Contractual Services for Reconstruction and Repairs of Housing on a Turnkey Basis", 29 January 2009.

**Table 3: RHS Construction Materials, Wholesale Prices (QQI) vs Market Prices, April 2011**

| Region                  | Bricks<br>Price per 1,000 |                     |                     | Doors<br>Price per m <sup>2</sup> |                     |                     | Roofs<br>Price per m <sup>2</sup> |                     |                     | Windows <sup>a</sup><br>Price per<br>m <sup>2</sup> |
|-------------------------|---------------------------|---------------------|---------------------|-----------------------------------|---------------------|---------------------|-----------------------------------|---------------------|---------------------|-----------------------------------------------------|
|                         | Market<br>SUM<br>000's    | QQI<br>SUM<br>000's | Cost<br>Saving<br>% | Market<br>SUM<br>000's            | QQI<br>SUM<br>000's | Cost<br>Saving<br>% | Market<br>SUM<br>000's            | QQI<br>SUM<br>000's | Cost<br>Saving<br>% | Market<br>SUM<br>000's                              |
| Karakalpakstan          | 110                       | 85                  | 29%                 | 75                                | 75                  | 0%                  | 19                                | 15                  | 28%                 | 180                                                 |
| Andijan                 | 150                       | 85                  | 76%                 | 100                               | 75                  | 33%                 | 18                                | 15                  | 23%                 | 132                                                 |
| Bukhara                 | 120                       | 85                  | 41%                 | 180                               | 75                  | 140%                | 18                                | 15                  | 20%                 | 150                                                 |
| Djizzakh                | 130                       | 85                  | 53%                 | 76                                | 75                  | 1%                  | 17                                | 15                  | 15%                 | 126                                                 |
| Ferghana                | 110                       | 85                  | 29%                 | 110                               | 75                  | 47%                 | 20                                | 15                  | 35%                 | 190                                                 |
| Kashkadarya             | 110                       | 85                  | 29%                 | 75                                | 75                  | 0%                  | 17                                | 15                  | 15%                 | 125                                                 |
| Khorezm                 | 165                       | 85                  | 94%                 | 87                                | 75                  | 16%                 | 24                                | 15                  | 62%                 | 170                                                 |
| Namangan                | 150                       | 85                  | 76%                 | 100                               | 75                  | 33%                 | 18                                | 15                  | 21%                 | 132                                                 |
| Navoiy                  | 120                       | 85                  | 41%                 | 95                                | 75                  | 27%                 | 17                                | 15                  | 15%                 | 143                                                 |
| Samarkand               | 150                       | 85                  | 76%                 | 110                               | 75                  | 47%                 | 26                                | 15                  | 75%                 | 150                                                 |
| Sirdarya                | 160                       | 85                  | 88%                 | 67                                | 75                  | 1%                  | 17                                | 15                  | 15%                 | 66                                                  |
| Surkhandarya            | 120                       | 85                  | 41%                 | 85                                | 75                  | 13%                 | 17                                | 15                  | 15%                 | 136                                                 |
| Tashkent                | 200                       | 85                  | 135%                | 90                                | 75                  | 20%                 | 27                                | 15                  | 82%                 | 150                                                 |
| <b>National Average</b> | <b>138</b>                | <b>85</b>           | <b>62%</b>          | <b>96</b>                         | <b>75</b>           | <b>29%</b>          | <b>20</b>                         | <b>15</b>           | <b>32%</b>          | <b>142</b>                                          |

<sup>a</sup> Window wholesale cost not listed, QQI has yet to start production of windows.

Source: QQI, ADB staff estimates