
CHAPTER 4: ACCELERATING INFRASTRUCTURE DEVELOPMENT

EXECUTIVE SUMMARY

The infrastructure development program of the government aims to contribute to inclusive growth and poverty reduction. By providing safe, efficient, adequate, reliable, cost-effective, and sustainable infrastructure, it will support the growth of various sectors of the economy. In the same manner, it will enhance beneficiaries' access to goods and services.

Toward these ends, the following strategies will be employed:

I. GENERAL STRATEGIES

- A. Encourage Public-Private Partnerships (PPPs).** Pertinent guidelines and policies will be revisited to make these more responsive and attractive to the private sector.
- B. Improve project development and implementation.** Policy reforms geared towards the incorporation of Value Engineering/Value Analysis (VE/VA) and Risk Analysis in the project development process will be implemented. A fund that will support the conduct of feasibility studies may be established. To facilitate contract preparation and implementation, model transaction documents and a system for monitoring, management, and evaluation for PPP projects shall be developed.
- C. Synchronize planning and budgeting.** This will ensure that only those programs and projects that are strategic and critical to the realization of developmental goals will be prioritized for funding.
- D. Improve the regulatory environment of the Infrastructure Sector.** This may involve (a) the separation of regulatory and operation functions of agencies; (b) the establishment of a single regulator in sectors that are fragmented; and (c) the strengthening of regulatory institutions.
- E. Climate Change Adaptation and Disaster Risk Reduction and Management (CCA/DRRM).** The Infrastructure Sector will mainstream measures to adapt to as well as mitigate the impacts of climate change and natural disasters.
- F. Generate employment in infrastructure development.** An employment-intensive or labor-based scheme will be adopted where it is most optimal in infrastructure development to create employment opportunities.
- G. Coordinate and integrate infrastructure initiatives.** Development initiatives across the infrastructure subsectors will be coordinated and integrated. This ensures that the needs of these subsectors will be addressed within the fundamental levels of the infrastructure sector and that their contributions will be utilized to the fullest.

46 **II. TRANSPORT**

47

48 **A. Issues and Challenges**

49

50 **1. Absence of a National Transport Plan.** The absence of a National Transport Plan that
51 would guide the planning and implementation of transport initiatives is a major setback
52 for the subsector.

53

54 **2. Institutional and bureaucratic reforms.** The proposed institutional and bureaucratic
55 reforms under the 2004–2010 MTPDP to separate the operation and regulation functions
56 of transport agencies have not been enacted. Full restructuring of institutional
57 arrangements in the air, rail, and port transport subsectors needs to be made.

58

59 **3. Quality of existing transport infrastructure.** Assessments of the country’s transport
60 infrastructure network indicate that its quality and capacity remain low. These
61 deficiencies stem mainly from inadequate and unstable funding for the development,
62 management, and maintenance of existing assets.

63

64 **4. Lack of integration between national and local plans.** The lack of integration between
65 national and local government plans, programs, and projects results in gaps in the
66 transport network.

67

68 **5. Development of transport networks and logistics systems.** Towards promoting
69 productivity and competitiveness, there is a need to develop seamless multimodal
70 transport networks and logistics systems in strategic corridors. The previous
71 administration envisioned the Subic–Clark–Manila–Batangas (SCMB) Corridor to be a
72 major transshipment and logistic hub in Asia. This corridor, however, is still constrained
73 by inefficient logistics operation and infrastructure support which makes it less
74 competitive than intended.

75

76 **B. Strategic Plan and Focus**

77

78 **1. Adopt a comprehensive long-term National Transport Policy (NTP).** An NTP would
79 guide the formulation of an integrated and coordinated multimodal National Transport
80 Plan. An NTP would clearly establish the government’s policies on (a) resource
81 generation and allocation; (b) preparation of agency plans, programs, and projects; (c)
82 cost recovery and subsidies; (d) regulation of passenger transport services; (e) urban
83 transport; (f) transport logistics; and (g) governance. The NTP shall be operationalized
84 through an Executive Order (EO) in the interim but a legislative enactment will be
85 pursued within the medium-term.

86

87 **2. Prioritize asset preservation.** The upgrading of the quality and capacity of existing
88 transport infrastructure will be prioritized over expanding the coverage of the networks.
89 Thus, asset preservation will have primacy in resource allocation.

90

91 **3. Provide access to major tourism destinations and strategic production areas.** To
92 support these areas, dependable transport will be facilitated in coordination with LGUs.

93

- 94 **4. Promote environmentally sustainable transport.** The transport subsector shall support
95 the shift to renewable energy to power vehicles. Non-motorized transport facilities, such
96 as walkways and bike lanes, will be provided.
97
- 98 **5. Identify and develop strategic logistics corridors based on a National Logistics**
99 **Master Plan.** To guide the overall development of seamless intermodal logistics systems
100 in strategic zones such as the SCMB Corridor, a National Logistics Master Plan shall be
101 crafted. Such a plan will harmonize transport initiatives with industrial and area
102 development plans.
103
- 104 As to the SCMB Corridor, its extension to the north and south is envisioned. In addition,
105 the viability of establishing a high-speed mass transit rail system that is integrated with
106 the commuter rail system in Metro Manila will be explored. Freight rail services shall
107 likewise be contemplated.
108
- 109 **6. Improve the Road RORO Transport System (RRTS).** Inter-island logistics shall be
110 enhanced by further developing the RRTS. The domestic shipping industry shall also be
111 studied towards identifying action plans to lower inter-island shipping costs. Efforts to
112 improve performance and efficiency in port operations shall likewise be pursued.
113
- 114 **7. Explore ASEAN connectivity through RORO.** To support ASEAN connectivity, the
115 development of existing RORO ports and the necessary regulatory framework to enable
116 the accommodation of international RORO ships shall be studied. The development of
117 port facilities through PPP to cater to cruise tourism, both servicing inter-island cruises
118 and international cruise vessels, may also be explored.
119
- 120 **8. Adopt a Modified Liberal Air Policy.** The adoption of a Modified Liberal Air Policy
121 (pocket open skies policy) will be considered. This policy will allow airlines from foreign
122 countries to fly to any airport in the Philippines except Ninoy Aquino International
123 Airport (NAIA), which is currently congested. Reciprocity on these terms will be ensured
124 by government.
125
- 126 **9. Enhance LGU capacity to become more effective partners in development.** LGUs
127 may enhance their effectiveness in accessing financing either through local taxes to
128 augment their internal revenue allotments, or by tapping private sector financing. LGUs'
129 capability in planning shall likewise be enhanced towards achieving harmonized plans
130 with the national plan.
131
- 132 **10. Establish an integrated national and local transport database.** To aid planning and
133 project development, the collection and management of key transport-related data both at
134 the national and local levels shall be improved.
135
- 136 **11. Comply with safety and security standards.** Domestic standards on safety and security
137 shall be regularly upgraded and updated in keeping with international standards and
138 practices. These shall be strictly implemented and enforced.
139
- 140 **12. Separate the regulation and operation functions of transport and other concerned**
141 **agencies.** The dual roles of air, water, and rail transport agencies as both regulators and
142 operators shall be addressed by establishing respective separate and independent regulator

(or regulators), which will have jurisdiction over all airports, ports, or railways. For rail transport in the interim, the separation of the policy, planning, and regulation functions from the delivery of train services will be pursued, as this would enable private sector participation.

13. Encourage stakeholder participation and implement IT-based procedures. For full transparency and accountability, the government shall engage the active participation of the public in governance, monitoring, and feedback. To encourage objectivity in government processes, IT-based procedures shall be instituted.

14. Provide linkages to bring communities into the mainstream of progress and development. Transport networks in underdeveloped regions and conflict-affected areas shall be improved to open up economic opportunities and help solve peace and order problems.

III. WATER

A. General Issues, Challenges, and Strategies within the Water Subsector

1. General Issues and Challenges

a. Water Governance. There are at least thirty (30) agencies in the water subsector with specific but often overlapping or conflicting mandates and the lack of a single lead agency to coordinate and implement these agencies' efforts is a major hurdle to achieving both equity and efficiency goals.

Furthermore, the lack of comprehensive, updated, integrated, and harmonized data on the water subsector impedes effective planning, monitoring, and implementation.

b. Millennium Development Goals (MDGs). MDG 7 commits to halving the number of people without access to water and basic sanitation by 2015. Meeting the targets under this particular MDG is thus a major challenge.

c. Climate Change and Disaster Risk. Effects of climate change include extended dry seasons and unprecedented amount of rainfall which bring about disasters that accentuate insufficiencies in existing infrastructure. As the Philippines is highly vulnerable to the impacts of climate change and disaster, there is a need to design climate-proof and disaster-resilient infrastructure, taking into account current and future risks.

2. General Strategies

a. Adopt Integrated Water Resources Management (IWRM). IWRM has been identified as an overall strategy for the (i) effective protection and regulation of water for security and ecosystem health; (ii) provision of responsive services for present and future needs; (iii) improved effectiveness, accountability and synergy among water-related institutions and stakeholders; and (iv) adaptive and pro-active responses to emerging as well as future challenges.

- 192 b. **Identify a lead agency for the Water Subsector.** Through legislative action, a lead
193 agency shall be created as a line department, which will assume policy and
194 coordination functions as well as the resource regulation function of the National
195 Water Resources Board (NWRB). In the interim, the NWRB should be strengthened
196 for it to be able to continue to as the overall economic and resource regulator in the
197 subsector.
198
- 199 c. **Rationalize financing in the Water Subsector to attain MDG commitments.**
200 Given the lack of a coherent financing framework, there is an urgent need to
201 rationalize financing in the water sector to maximize utilization of limited public
202 funds, concessional financing and private sector investments to deliver sector
203 development outcomes.
204
- 205 d. **Apply Climate Change Adaptation (CCA) and Disaster Risk Reduction and**
206 **Management (DRRM) Strategies.** In order to mainstream CCA and DRRM in water
207 infrastructure, formulation of plans and designs should already consider the varying
208 effects of climate change. Specifically, there is a need to develop disaster-resilient
209 infrastructure which also help mitigate the adverse effects of climate change. An
210 integrated ecological and economic approach to the development of water
211 infrastructure needs to be established, such as those which will harnesses “excess”
212 flood waters for non-domestic re-use, among others.
213
- 214 e. **Improve information management for planning and implementation.** Data
215 collection and sharing has to be synchronized to support planning and budgeting of
216 key programs and projects.
217

218 B. Water Supply

219 1. Issues and Challenges

- 220 a. **Access to water supply services.** While various published estimates may vary, most
221 show a general low coverage and level of access to safe drinking water in many areas
222 of the country. Moreover, there is a wide disparity in the scope and level of coverage
223 between urban and rural areas. The 2010 Philippines Progress Report on the MDGs,
224 however, reveals that the sector is on track in attaining MDG commitments.
225 Notwithstanding, achieving 100 percent coverage remains a challenge as 15.73
226 million are still without access to safe water supply.
227
228
229
- 230 b. **Investment needs and financing.** The investment levels are clearly too low to meet
231 the growing demand for water. Among the core constraints to water service providers’
232 expansion of coverage and improvement of quality of service is the low tariffs which
233 hinder cost recovery and do not enable accumulation of funds for new capital
234 expenditures. While cost recovery has been identified as policy for regulation, there
235 has been minimal actual progress toward this end.
236

237 There is no clear policy framework for financing water supply programs and projects
238 as financing come from a variety of sources.
239

240 **2. Strategic Plan and Focus**

241

242 Implementation of the following strategies identified within the Philippine Water Supply
243 Sector Roadmap (PWSSR) is crucial to achievement of the development goal to provide safe,
244 adequate and sustainable water for the entire country.

245

246 a. **Implement the Philippine Water Supply Sector Roadmap (PWSSR).**
247 Implementation of the strategies stated in the PWSSR is crucial to achievement of the
248 development goal to provide safe, adequate and sustainable water for the entire
249 country.

250

251 b. **Strengthen Economic Regulation.** The creation of a single, independent economic
252 regulator for water supply services is a priority strategy to address institutional
253 fragmentation and the low level of investments in the sector. Pending positive action
254 from the Legislative Branch, NWRB must be strengthened to allow partial resolution
255 to the current situation.

256

257 c. **Implement a priority program to provide water to waterless areas.** Stakeholder
258 consultations have affirmed the need for a specific priority program which shall
259 ensure achievement of MDG 7 and sustained 100% access to water within the
260 medium-term.

261

262 d. **Develop sustainable new water sources to meet demand.** A comprehensive
263 approach, adhering to the IWRM framework, for projecting the demand-supply gaps
264 across the country as well as for planning the development of new water sources will
265 be developed. Alternatives will be identified and prioritized based on a value
266 engineering perspective.

267

268 e. **Localize national policies to address implementation issues.** LGUs should be able
269 to develop their respective local roadmaps containing plans and strategies aligned
270 with national policies and targets, including those identified in the PWSSR.

271

272 f. **Develop capacities of NGAs, LGUs, and water service providers for the**
273 **sustainable management of Water Supply.** LGU capacities in effective water
274 governance, sustainable use of water resources, and planning for climate change
275 adaptation will be enhanced. Water service providers will also be capacitated in plan
276 development, budgeting and operations, among others, as these are critical to ensuring
277 improved coverage, efficiency and sustainability of water supply.

278

279 **C. Sanitation, Sewerage, and Septage Management**

280

281 **1. Issues and Challenges**

282

283 a. **Access to sanitation facilities and sewerage and septage management services.**
284 The WHO/UNICEF Joint Monitoring Program (JMP) on the MDGs show a general
285 increasing trend on improved coverage from 1990 to 2008 with a corresponding
286 reduction in open defecation. Estimates from the JMP shows that the country is on
287 track to meeting MDG targets for sanitation. However, data from the Department of

288 Health (DOH) and the 2010 Progress Report on the MDGs both show fluctuating
289 year-on-year coverage estimates.

290
291 Sanitation facilities generally require sewerage or septage management.
292 Unfortunately, there have been few investments in proper sewage collection and
293 treatment, especially outside Metro Manila. Less than 10% of the population has
294 access to sewerage services. Outside Metro Manila, selected HUCs provide service to
295 about less than 3% of their respective area populations (WB, 2005).

296
297 b. **Investment and Financing.** Despite several national sewerage and sanitation policies
298 like the Sanitation Code of 1975 and the Clean Water Act, the investments in and the
299 demand for sanitation, sewerage and septage facilities remain low. Only 3% of public
300 investments in water supply are used for sanitation (PSSR: 2010). LGUs have limited
301 investments as only few have the capacity to implement, operate and maintain these
302 systems. Private sector investments are equally limited.

303
304 c. **Technologies and Institutional Capacities.** There is a lack of research on innovative
305 technology to provide economically and ecologically efficient sanitation, sewerage
306 and septage facilities. Technical capacity to plan for, implement, operate and
307 maintain these facilities are equally limited. Similarly, institutions with sanitation
308 mandates have low capacity to monitor the extent and level of service.

309

310 2. Strategic Plan and Focus

311

312 Implementation of the following strategies also mentioned in the Philippine Sustainable
313 Sanitation Roadmap (PSSR) will ensure achievement of MDG 7 and sustained expansion of
314 service coverage throughout the medium-term.

315

316 a. **Develop effective national leadership.** The DOH must be established as an
317 empowered national sector driver to ensure that sanitation, sewerage and septage
318 targets and plans are met and that critical policies are implemented. Subsequently, this
319 will enable the establishment of responsive sanitation governance and regulatory
320 strengthening.

321

322 b. **Formulate and implement national policies to support sustainable sanitation.** The
323 National Policy on Sustainable Sanitation will articulate specific national targets and a
324 detailed strategy to eliminate open defecation, establish sanitation as an emergency
325 response and facilitate localized planning and budgeting for expansion of coverage.

326

327 c. **Rationalize investments and financing.** To provide adequate infrastructure,
328 incentive mechanisms and alternative financing schemes shall be established to target
329 vulnerable areas and ensure sufficient financing to meet sanitation coverage targets.

330

331 d. **Implement a comprehensive and aggressive communication strategy.** This will be
332 aimed at educating the public and decision-makers to increase demand for sanitation
333 services.

334

335 **D. Irrigation**

336

337 **1. Issues and Challenges**

338

339 a. **Demand for irrigation water.** Given competing demands on water, water needs to be
340 recognized as an economic good; consequently, the productive use of water in
341 agriculture must be maximized to ensure that full benefits are attained and waste is
342 minimized.

343

344 b. **NIA's system and financial performance.** Although considerable improvement in
345 NIA's performance has been attained over the years, NIA needs to sustain the
346 momentum gained in order to achieve sustained fiscal stability to be able to perform
347 its mandate.

348

349 c. **Performance of irrigation systems.** The performance of most of National Irrigation
350 Systems (NISs) and Community Irrigation Systems (CISs) nationwide has remained
351 poor due to inadequate operation and maintenance (O&M), lack of routine repair and
352 ineffective management of available irrigation water sources due to technical and
353 institutional deficiencies.

354

355 **2. Strategic Plan and Focus**

356

357 a. **Rehabilitate existing irrigation systems and construct new small-scale systems.**
358 Provision of support services and infrastructure shall be geared towards the
359 rehabilitation, repair and maintenance of existing irrigations systems. Construction of
360 new infrastructure shall focus on the development of small-scale irrigation and water
361 impounding systems. This notwithstanding, large-scale irrigation systems may be
362 implemented as part of a multi-purpose infrastructure development.

363

364 b. **Protect irrigated and potential irrigable lands.** In recognition of the alarming rate
365 of depletion of irrigable lands due to conversion as well as government's thrust in
366 ensuring food security, a review of government policies protecting productive land is
367 supported. To complement such initiative and in order to clearly identify gaps, land-
368 use mapping indicating the extent of irrigable areas vis-à-vis irrigated areas is
369 required.

370

371 c. **Implement Irrigation Management Transfer (IMT).** IMT aims to transfer to
372 Irrigators' Associations complete responsibility for operation and maintenance of
373 secondary canals and on-farm structures in larger systems and of entire systems that
374 are less than 3,000 hectares.

375

376 d. **Develop a volumetric pricing mechanism.** As a long-term strategy in ensuring
377 efficient use of water, wholesaling of the resource at the headgate to Irrigators'
378 Associations is expected to drastically cut down collection expenses. In the interim,
379 NIA may improve and adopt socially-accepted demand management strategies.

380

381 **E. Flood and Drainage Management**

382

383 **1. Issues and Challenges**

384

385 a. **Climate Change.** Recent events (Typhoons Ondoy and Pepeng) have shown the
386 massive extent of damage brought about by the unpredictable weather patterns
387 resulting from climate change. Existing flood control structures in identified high risk
388 areas nationwide have proven to be inadequate in handling the unexpected increase in
389 stormwater discharge, which resulted in massive flooding both in HUCs and rural
390 areas.

391

392 b. **Investment needs and financing.** The Department of Public Works and Highways
393 (DPWH) has identified several critical flood control projects nationwide, however,
394 due to insufficiency of funds, cannot be implemented immediately. Operation and
395 maintenance costs are also heavily dependent on government allocation and are
396 thereby not exempt from funding constraints.

397

398 c. **Disaster mitigation and response.** Coordination among government agencies and
399 LGUs poses problems in the implementation, operation and maintenance of flood
400 control structures. It remains unclear on who shall take responsibility on operation
401 and maintenance as there is no law/guideline clarifying the sharing of this
402 responsibility between the LGUs and the government agencies.

403

404 **2. Strategic Plan and Focus**

405

406 a. **Apply CCA and DRRM strategies in planning and design of flood management**
407 **structures.** Design criteria used for flood control structures would have to be
408 revisited to ensure that design capacities of structures are adequate to handle the
409 expected increase in volume of floodwater. Moreover, downstream interventions
410 would have to be complemented with activities upstream such as watershed
411 management to minimize siltation.

412

413 b. **Develop a mechanism to expedite immediate financing for the rehabilitation of**
414 **flood management structures.** To expedite the process, it may be prudent to provide
415 annual appropriations within DPWH's budget. Likewise, DPWH and affected LGUs
416 may opt to avail of various available financing mechanisms, designed specifically for
417 post-disaster rehabilitation and repair works.

418

419 c. **Increase local government and community participation.** Given that flood-related
420 risks and damages are immediate concerns of the local communities, it is imperative
421 that their cooperation and participation in operations and maintenance of flood
422 management structures and measures as well as disaster response is enhanced.

423

424 **IV. POWER AND ENERGY**

425

426 **A. Energy Security**

427

428 **1. Issues and Challenges**

429

430 a. The MTPDP recognizes the importance of developing alternative energy sources,
431 most especially those of indigenous and renewable forms, with a view to providing
432 security of supply as well as realizing savings from importation. It is envisioned that
433 the country will soon attain an energy self-sufficiency level of 60 percent.

434

435 b. The RE Law is still in its infancy stage. Among the cross-cutting issues that have been
436 raised on renewable energy development during various energy consultations were as
437 follows:

438

439 1) High cost of RE development to include limited local manufacturers, fabricators
440 and suppliers of RE equipment and components;

441

442 2) Limited options to optimize the development of resources due to lack of updated
443 database on RE resources;

444

445 3) Lack of capacity building and training opportunities to enhance technical
446 capability of stakeholders and potential developers;

447

448 4) Need to strengthen R&D on RE;

449

450 5) Limited infrastructure support (transmission line and submarine cable)

451

452 6) Limited information and education campaign activities on RE to include advocacy
453 on its benefits

454

455 7) Absence of direct policy linkages with grass roots; and

456

457 8) Tendency to depend on government initiative and resources for energy project
458 development.

459

460 **2. Strategic Plan and Focus**

461

462 a. **Award exploration and development contracts through the Philippine Energy**
463 **Contracting Round (PECR).** Through PECR, the oil and gas sector is expected to
464 yield a total of additional 23 Service Contracts (SCs) and drilling of 35 wells by end
465 of 2016.

466

467 b. **Direct negotiations for frontier areas and publication of nominated areas.** As a
468 strategic investment scheme for the country's resource frontier areas, the DOE will
469 explore direct negotiations with interested investors. Meanwhile, nominated areas for
470 exploration will be published in international papers and local papers of general
471 circulation.

472

473

- 473 d. **Conduct RE resource assessment to determine potential sites for capacity**
474 **addition.** To support the RE Law, the following studies on resource inventory
475 potential among RE technologies are being done: (a) The Study on Resource
476 Inventory on Hydropower Potential in the Philippines; (b) Biomass Resource
477 Assessment in the Philippines; and (c) Wind Resource Assessment
478
- 479 e. **Convert RE service contract (pre-development) to commercial stage.** The
480 government targets to expand the contribution of the following RE sources to the
481 country's primary energy mix both for power and non-power applications: Wind (103
482 sites), Solar (4 sites), Geothermal (21 sites), and Hydro (392 sites).
483
- 484 f. **Increase utilization of alternative fuels.** This will be done by (a) implementing
485 higher biofuels blend and corresponding standards in phases subject to availability of
486 supply; (b) conducting R&D for other non-food feedstock in coordination with
487 concerned agencies, academe, and research institutions; and (c) continuously
488 promoting the use of other alternative fuels as well as other emerging energy
489 technologies such as electric vehicles in the transport sector.
490
- 491 g. **Develop a framework/methodology for the pricing of indigenous energy.** There
492 may be a need to benchmark the prices of coal which is currently dictated on a per
493 contractor basis (which is also based on international price of coal). Similarly, the
494 price of indigenous natural gas is benchmarked with the international price, which is
495 indexed with the price of crude oil. Meanwhile, the price of geothermal steam is
496 likewise benchmarked with the price of coal.
497

498 **B. Power Sector Development**

499 **1. Issues and Challenges**

- 500 a. Given the current trends in the sector, with the average annual growth rate for peak
501 demand assumed at 4.5%, for the planning period 2009-2030, a total of 11,900 MW is
502 needed for Luzon Grid, 2,150 MW is needed for the Visayas Grid and a total of 2,500
503 MW is needed for the Mindanao Grid.
504
- 505 b. Per the EPIRA, the liberalized and market-based power industry already in place
506 relegates to the private sector the construction of generation plants in filling up this
507 demand. In addition, the usual gestation period to build new electric power plants is
508 three to five years. However, private sector investments in power generation have
509 been lower than expected vis-a-vis the energy demand projections.
510
- 511 c. The decrease in dependable capacities of hydro plants due to El Niño and preventive
512 maintenance schedule of some power plants caused the supply deficit of several
513 power plants.
514
- 515 d. WESM has been operational in Luzon, but WESM operations have been hindered by
516 inadequate capacity both in the transmission and generation facilities in the Visayas
517 region. On the other hand, Mindanao market rules have yet to be set.
518
519
520

- 521 e. Electric Cooperatives (ECs) are private in nature but are still receiving sizeable
522 government subsidies.
523
- 524 f. Some provisions of the Magna Carta for Residential Electricity Consumers weakened
525 the implementation of the Anti-Pilferage Law, leading to increase in system loss and
526 inefficiencies of ECs. Examples of these provisions are in Article 19 of the Magna
527 Carta, giving the consumer the right to tender payment at the point of disconnection
528 or provide a deposit representing past of the billing; Article 20 gives the right to
529 service despite the arrears of the previous occupants of a building/dwelling place;
530 and within Articles 16-25, giving the consumer the right to suspension of
531 disconnection, if it is a holiday, if there is a funeral or if the consumer is sick.
532
- 533 g. The Energy Regulatory Commission (ERC) commissioners are political appointees,
534 as stipulated in the EPIRA. Given this set-up, issues on transparency and
535 independence are hence emerging. Under Chapter 22: Bureaucratic Reforms of the
536 2004-2010 MTPDP, an intended assessment of the Energy Regulatory Commission's
537 (ERC) performance and processes was planned. It was further suggested that "an
538 independent search committee that employs transparent selection procedures shall be
539 established." However, given its legal basis, no such assessments and evaluation of
540 the ERC has been done to date.
541
- 542 h. An independent monitor of the regulatory setup of the sector is deemed necessary for
543 purposes of checks and balances, especially once the Generation and Transmission
544 sectors are privatized.
545

546 2. Strategic Plan and Focus

- 547
- 548 a. **Put in place a reliable Power Supply.** To achieve a reliable power supply between
549 2010 to 2016, the following areas of action are identified through the updating of the
550 Power Development Plan to include:
551
- 552 1) close monitoring of committed and indicative power projects;
 - 553 2) retention of remaining unprivatized power plants;
 - 554 3) vulnerability assessment of energy facilities to climate change and natural
555 disasters (e.g. El Nino and La Nina);
 - 556 4) study on re-commissioning of power plants under preservation (e.g. Sucat,
557 Duracom);
 - 558 5) upgrading or rehabilitation of NPC and privatized plants;
 - 559 6) diversify power sources in Mindanao to address susceptibility of hydro power
560 plants to climate change impacts; and
 - 561 7) formulate a national nuclear power program.

562
563 *Other identified areas for action include the following:*
564

- 565 1) Immediate establishment of triggers that would allow Government to build power
566 plants given the private sectors' lack-luster participation; and
- 567 2) Participation of independent players in the global carbon market to sell emission
568 credits should be strongly supported and actively improved.
569

570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614

b. Improve power transmission and distribution systems

- 1) Subterranean and submarine transmission lines should be envisioned for construction and operation especially in urbanized areas for security/pilferage prevention and long-term economic life. The infrastructure of major gas pipeline networks needs to be strengthened and expanded to reach commercial establishments and households.
- 2) WESM should start to be fully operational nationwide. Electric cooperatives and private distribution utilities should have been strengthened and enabled to participate in the electricity market.
- 3) Lifeline policies and subsidies should be rationalized soonest.
- 4) Implement Time of Use Rates and Demand Side Management.
- 5) The Magna Carta for Residential Electricity Consumers should be revised and improved.

C. Nationwide Electrification

1. Issues and Challenges

As of 31 July 2010, the country’s overall barangay electrification level is at 99.87 percent from 99.39 percent in 2009, leaving only 54 barangays programmed for electrification until the end of the year. For households, as of July 2010, household connection level in the country has already reached 74.0 percent or 14,204 out of more than 17,500 million households have electricity connection. Sitio electrification level was at 69% or roughly 67,992 out of 98,568 sitios. A large portion of the remaining unenergized barangays (missionary areas) is mostly remote and with dispersed households that are more difficult to energize, requiring extensive resources, time and effort.

Pursuant to Section 70 of the EPIRA, SPUG is responsible for providing power generation to areas not connected to the grid. The NPC Main Grid cannot advance funds anymore to finance the operations of SPUG including the project implementation since the main grid plants were already sold. SPUG’s funds are coming from its revenues and the UCME subsidy. Of the latest approved UCME equivalent to Php2.7 Billion for each year from 2010-2013, only Php533 Million is allotted for CAPEX projects. This amount is not sufficient to fund all SPUG projects and requires additional funding source. SPUG is now looking for other sources of funds.

2. Strategic Plan and Focus

Once all the barangays are provided with access to electricity, the electrification program will expand its coverage to include the provision of electricity to 90.0 percent of households in the country by 2017. The DOE together with NEA, will undertake the completion of a sitio baseline and the development of the Sitio Electrification and Household Connection Masterplan.

V. **INFORMATION AND COMMUNICATIONS (ICT) INFRASTRUCTURE**

A. **Issues and Challenges**

1. **Barrier/challenges to private sector efforts to provide ICT infrastructure, particularly in missionary areas.** Although the current backbone infrastructure already connects most of the Philippines, there are a few or no links connecting it to significant numbers of final users, such as communities, households, schools, as well as local units and agencies of government, especially in the rural areas. For the government to harness ICT for growth, there is a need to improve the digital infrastructure, build capacity, enhance e-Government services, and create an enabling environment for the ICT Sector.
2. **The legal and regulatory environment is not conducive for investments in infrastructure.** There is a need to pursue various legal and regulatory reforms to ensure that the current regulatory environment does not act as a barrier for improved private sector investments in ICT. Government must continue to cultivate an enabling regulatory environment that ensures competition and a level playing field for the provision of ICT infrastructure and services.
3. **Access to the internet and related technologies, including participation in ICT investments and opportunities, is not yet available into all segments of the population.** There is a need to ensure that the benefits of the Internet and related technologies, including participation in ICT investment and opportunities, is made available into all segments of the population, including particularly people who are disadvantaged due to education, age, gender, disabilities, ethnicity, income and/or those living in remote regions.
4. **Inadequate infrastructure support for e-Government.** There is a lack of facilities for e-Government development as well as an inability of government ICT systems to connect and/or access each other's systems.

B. **Strategic Plan and Focus**

1. **Provide incentives/lower risk for the private sector to invest in rural and unserved areas.** Incentives could be in the form of fiscal incentives or limited protection from competition.
2. **Issue appropriate guidelines to facilitate technology and service deployment.** Development of a Policy on Broadband for universal access will facilitate spectrum management as well as frequency allocation in rural areas. Infrastructure sharing is encouraged to maximize the use of existing facilities.
3. **Network Pooling.** The possibility of working with private sector to pool networks together for purposes of providing public sector needs for broadband (in education, health, etc.) and to avoid unnecessary duplication of investments and resources could also be explored.
4. **Create a Universal Access Fund utilizing Spectrum User Fees (SUFs).** The National Telecommunications Commission (NTC) already collects SUFs, which the operators

- 664 would normally pass on to the consumers through the service fees. These funds can now
665 be used to build infrastructure in rural areas. Consequently, a possible option is to
666 institutionalize the use of SUFs to create a Universal Access Fund.
667
- 668 5. **Last Mile Access.** Enable citizens in unserved/underserved areas to access secure, online
669 E-Government services through affordable and ubiquitous technologies (e.g., mobile
670 phones).
671
- 672 6. **Legislative Reform Agenda.** Legislative action shall be sought towards the following
673 reforms: (a) Establishing the Department of Information and Communications (DICT);
674 (b) Strengthening of the NTC; (c) Competition Policy for the ICT Sector; and (d)
675 Convergence Bill / Information and Communications Policy Act. RA 7925 or the Public
676 Telecommunications Act will be revisited.
677
- 678 7. **Collection, sharing, and use of data and key indicators.** Collection, sharing, and use of
679 data and key indicators will be improved by (a) building technical and human resource
680 capacity of CICT and NTC to assess market infrastructure needs; (b) regular inventory of
681 infrastructure and related investments; and (c) assure freedom of access to information by
682 the public.
683
- 684 8. **Security of data in a network.** The country's cybersecurity threat prevention, detection
685 and response capabilities will be improved by providing critical infrastructure.
686
- 687 9. **Establish a sustainable Community e-Center (CeC) Program.** A Community e-Center
688 (CeC) is a self sustaining shared facility providing affordable access to ICT-enabled
689 services and relevant content. It serves as a conduit for efficient delivery of government
690 and other services and as a potent tool for empowerment and participation of unserved
691 and underserved communities in development.
692
- 693 10. **Legislative measures/agenda.** These measures will be geared towards (a) allowing
694 access to ICT for the disabled and marginalized; and (b) providing incentives for R&D.
695
- 696 11. **Explore the possibility for government to issue a separate document to emphasize its
697 policy on and commitment to digital inclusion.**
698
- 699 12. **Develop a framework for interoperability.** There is a need to develop specific policies
700 to mandate interoperability as this will enable easier and more efficient exchange and
701 processing of data across NGA applications.
702
- 703 13. **Establish an e-Government Data Center.** A data center can be used for business
704 recovery purposes, R&D lab for future e-government scenarios and evolving long-term e-
705 government and security solutions, hosting shared services and sensitive government data
706 and applications.
707
- 708 14. **Unified Government Network Management.**
709
- 710 15. **Enhancement of e-Government Portals and e-Government Applications.** The
711 eGovernment Portal, including the online payment facility, should be enhanced, meaning
712 there should be more digital contents and secured applications. eGovernment applications

713 in the LGU level should be promoted so that the established applications such as those
714 for real property, business permitting, and treasury and accounting and other applications
715 for LGUs would be used by all LGUs to provide better services to their constituents and
716 increase their revenues.

717

718 VI. SOCIAL INFRASTRUCTURE

719

720 A. Waste Management

721

722 1. Solid Waste Management

723

724 a. Issues and Challenges

725

726 1) Need for an elaboration of the strategies to include a short and a long term
727 solution to properly address problems on solid waste management;

728 2) Lack of framework for the setting-up of baseline indicators to be used by LGUs
729 for self-monitoring;

730 3) Overlapping national and local policies;

731 4) Fully operationalize the National Ecology Center and the Regional Ecology
732 Centers;

733 5) Need to improve and upgrade the national database for SWM;

734 6) Lack of technical capabilities at the LGU level;

735 7) Lack of sufficient trained personnel at the National and Local level; and

736 8) Lack of alternative livelihood program for the informal waste sector;

737 9) Lack of support of the Recycling Industry; and,

738 10) Massive implementation of 3Rs at the Household and Barangay level.

739

740 b. Strategic Plan and Focus

741

742 1) **Establish of a start-up fund to accelerate the implementation of the**
743 **Ecological Solid Waste Management Act (ESWMA).** The National fund is
744 needed to start the different tasks of the NEC. Additional funds are to be
745 established for the implementation of the SWM approaches.

746

747 2) **Develop a framework for the setting-up of baseline data/indicators on SWM**
748 **of the LGU level.** These shall include the establishment of a monitoring and
749 evaluation system thru the development of an accessible database on waste
750 characteristics, diversion rate, LGU compliance, alternative technologies and
751 other parameters which will foster for better information exchange.

752

753 3) **Harmonize related national and local policies, approaches and guidelines.**

754

755 4) **Revisit existing policies, rules and regulations of the sector as well as other**
756 **related issuances that may hamper implementation of the SWM Act of 2000.**

757

758 5) **Operationalize the National Ecology Center and Regional Ecology Centers** to
759 act as hub for information, networking, showcasing of technologies and advocacy.

760

- 761
762
763
764
765
766
767
768
769
770
771
772
773
774
- 6) **Mainstream the informal waste sector** in the programs of the national and local governments to enable them to be part of the decision-making processes of SWM boards and committees.
 - 7) **Establish regional recycling centers and implement additional SWM approaches for recyclables to lead to a higher diversion rate.**
 - 8) **Support the massive implementation of the 3Rs.** This will be done by (a) Formulating an SWM advocacy program to enable LGUs with no proper SWM to replicate successful projects; (b) conducting massive Information Education and Communication (IEC) campaign thru various mass media; (c) providing incentive schemes that reward good practices of SWM activities; (d) developing a curriculum on SWM to be integrated in the Philippine Education System.

775 **2. Health Care Waste (HCW)**

776
777 **a. Issues and Challenges**

778
779 There are around 2100 public or government and private hospitals nationwide with an
780 approximate capacity of 96,000 beds, generating 28,000 kg. of health care wastes (HCW)
781 per day at an average of 0.30 kg. per bed capacity per day. There are around 680 public
782 hospitals with an approximate capacity of 44,000 beds generating 13,200 kg. of HCW per
783 day.
784

785 Thirty percent (30%) of the 72 hospitals, mostly in Metro Manila, contract out their waste
786 treatment and disposal while the rest use chemical disinfection for waste treatment, but
787 are far from or have no access to a sanitary landfill for final disposal of treated wastes.
788 Aside from this, 90% of 72 hospitals managed by the DOH have existing sewage
789 treatment plants or are undergoing installation of the same.
790

791 **b. Strategic Plan and Focus**

- 792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
- 1) **Institutionalize health care waste management system in health facilities** through investment in training and communications. Schools that include health care waste management processes in their technical curricula should be given incentives;
 - 2) **Engage Local Government Units in public-private partnership options and financial schemes for the establishment of large-scale waste treatment technologies.** A viable option is the development of BOT projects for cooperative waste treatment facilities and sanitary landfills;
 - 3) **Provide incentives to private investment** for the promotion of research, development and manufacture of non-mercury based devices and technologies used in health facilities and for health care; and
 - 4) **Encourage development and manufacture of local waste treatment technology** and ensure their availability in the market for competition.

810 **3. Toxic Chemicals and Hazardous Wastes**

811

812

a. Issues and Challenges

813

814

1) Recycling and reuse of material is another mass burn incineration (MBI) worth pursuing. Reducing solid wastes by 10% can save about \$7.7 million in SWM costs (ADB, Metro Manila SWM Study);

815

816

817

2) Development of interactive database for tracking chemicals, solid and hazardous wastes management; and

818

819

3) Improvement in Monitoring System especially in the regions.

820

821

b. Strategic Plan and Focus

822

823

1) Strict enforcement of RA 6969 through survey and monitoring activities;

824

2) Develop a national plan for dealing with chemical incidents;

825

3) Review of existing regulations related to toxic chemicals and hazardous wastes;

826

827

4) Development of interactive database for tracking of chemicals and hazardous wastes; and,

828

829

5) Continuous coordination with LGUs and other government agencies and massive information and education campaign.

830

831

B. Housing

832

833

1. Issues and Challenges

834

835

Based on the National Urban Development and Housing Framework (NUDHF) 2009-2016, the housing problem is serious and is, to a large extent, an urban phenomenon. The magnitude of the housing need, which is defined as the housing backlog plus new households, is enormous and estimated to reach about 5.8 million housing units in 2016.

836

837

838

839

840

The housing problem is very evident in the phenomenon of slums and informal settlements in the urban areas of the country. Recent estimates show that more than a third of urban populations are slum dwellers. In 2004, the HUDCC estimated that there were 675,000 informal settler families nationwide. In Metro Manila there were about 194,000 informal settler families as surveyed by the MMDA in 2007.

841

842

843

844

845

846

The role of government in providing access to housing opportunities and services must be clarified. The response of government to the shelter problem, in the last four decades, failed to rectify the fundamental issues of providing shelter, especially for the poor.

847

848

849

850

2. Strategic Plan and Focus

851

852

a. Develop and implement the appropriate standards in the construction of the housing units.

853

854

855

b. Integrate basic infrastructure support, such as provision of potable water, safe and sufficient electricity, access roads to the nearest commercial centers, ICT, among others.

856

857

858

- 859 c. Explore vertical expansion in the construction of housing units taking into
860 consideration the basic geographical location, soil quality and other environmental
861 consideration, which includes disaster-risk resilience and climate change adaptation.
862
- 863 d. Support other forms or modalities of security of tenure such as usufruct and lease
864 rights.
865
- 866 e. Develop public-private partnerships for onsite upgrading and resettlement.
867
- 868 f. Stimulate housing microfinance for end-user financing.
869
- 870 g. Strengthen community partnerships and stakeholderhip through capacity
871 development.
872
- 873 h. Localize housing and human settlements especially in terms of identifying housing
874 solutions and programming.
875

876 C. Health Facilities

877 1. Issues and Challenges

878 As reported by the Department of Health (DOH), although health facilities have become
879 available and accessible in most barangays, many communities remain unaware of the
880 services offered and consequently seek more specialized care in hospitals rather than their
881 Rural Health Units (RHUs) or Barangay Health Stations (BHS). Government primary health
882 facilities are conveniently located, as 94% of households are within 15-minute walking
883 distance to an RHU or BHS. However, these facilities are frequently bypassed for more
884 specialized care. RHU resources remain un-utilized while higher level facilities become
885 overcrowded, reverting to a state of inaccessibility.
886
887

888 In terms of health facility utilization, the Filipino Report Card on Pro-Poor Services in 2000
889 showed that 77% of households surveyed used health facilities of one type or another.
890 Compared to rural households, urban households tended to use health facility services more.
891 Due to the cheaper cost of health services, patients more frequently utilized government
892 facilities rather than private facilities. Rich household and urban respondents were the
893 predominant users of private facilities, although poor respondents also reported using private
894 facilities.
895
896

897 From 2007 to 2010, the government has allotted Php 8.43 Billion for infrastructure and
898 equipment upgrade of health facilities nationwide. For the coming year 2011, the
899 infrastructure aspect of the health sector will still experience funding restrictions due to the
900 limitation of the approved Department of Budget and Management (DBM) allocation for
901 infrastructure of health facilities such as Basic and Comprehensive Emergency Obstetric and
902 Neonatal Care (B/CEmONC) facilities as well as DOH retained and maintained hospitals.
903

904 D. Strategic Plan and Focus

- 905
- 906 a. Increase public investment for health and rationalize the use of all sources of funds for
907 health.

- 908 b. Secure fiscal autonomy for government health facilities by enforcing fiscal and
909 administrative autonomy in all DOH-retained facilities in exchange for capital outlay
910 support and progressive and well-calibrated re-allocation of hospital budgets to public
911 health priorities.
912
913 c. Invest in the Health Facility Enhancement Program (HFEP) that defines a unified and
914 rationalized health facility blueprint covering both public and private health facilities
915
916 d. Strengthen the gate-keeping function of lower level facilities.
917
918 e. Enhance the quality assurance system for public outpatient facilities like Rural Health
919 Units (RHUs) and Barangay Health Stations (BHSs).
920
921 f. Increase percentage of public and private hospitals for continuous quality
922 improvement.
923
924 g. Improve access to specialized services in subnational health facilities.
925
926 h. Observe the following in the construction of health facilities: (a) DOH-licensing
927 standards; (b) Disaster-risk resiliency and climate change adaptation; and (c)
928 Philhealth accreditation.
929
930 i. Integrate provision of proper waste management systems.
931
932 j. Engage PPP for the infrastructure aspect of the health sector.
933

934 E. Education

935 1. Issues and Challenges

- 936 a. **Shortage of classrooms.** Even with the continuous efforts to build new schools,
937 shortage is still apparent. Total classroom requirement is at 152,569 for all levels
938 [Assumption: Single Shift across all regions at 1:45 (for regular ES and SS), 1:15
939 Double Shift for SPED and 1:25 Double Shift for Pre-School]. For next school year,
940 the estimated requirement for public schools is some 113,000 new classrooms, with
941 an estimated budget of over P77 billion. This does not consider yet the need for major
942 repair on 14% of the existing classrooms estimated to be worth P14 billion in 2011.
943
944 b. **Calamities.** Maintaining adequate classrooms is even challenged further by the
945 destruction of existing ones due to calamities that often hit the country. Moreover,
946 another factor being considered is that these classrooms are being utilized as
947 temporary shelter for those affected by calamities.
948
949 c. **Sanitation facilities.** Not all schools have been provided with adequate sanitation
950 facilities. Insufficient facilities for hygiene may lead to the degradation of health of
951 students that in turn, may adversely affect their academic performance.
952
953
954

- 955 **2. Strategic Plan and Focus**
956
957 a. **Maintain the DepEd School Building Program through the Basic Education**
958 **Facilities Fund.**
959
960 b. **Explore PPPs.** DepEd will expand its linkage in exploring various procurement
961 modalities to close the classroom gap in 2-3 years. The private sector is being tapped
962 pursuant to the Public-Private Partnership (PPP) Program of the Government. PPPs in
963 education (henceforth education PPPs) involve the public and private sectors working
964 together to achieve shared goals.
965
966 c. **Pursue the construction of disaster-resilient classrooms.** Classrooms for areas
967 prone to typhoons, earthquakes and other natural hazards will be ensured to be
968 specially designed to stand such calamities.
969
970 d. **Include water and sanitation facilities.** Schools will include adequate water and
971 sanitation facilities to protect the health of children and teachers. Additional funding
972 will be allotted for this purpose.