



What is the Quality of Gas worth?

1





Task of All Licenses

- ✓ Efficient system for controlling quality of distribution service, e.g. safety
- ✓ Gas distribution networks are functioning on economic foundations and are maintained in a way that safety is guaranteed
- ✓ Safety criteria for connections to gas distribution networks are determined.
- ✓ Observations of gas in the air is easy to report

[Dr. Zafer Demircan] [21-25/07/2008] 2





Allocation of tasks

Distribution system operator and Transmission system operator have main responsibility (prudent operator)

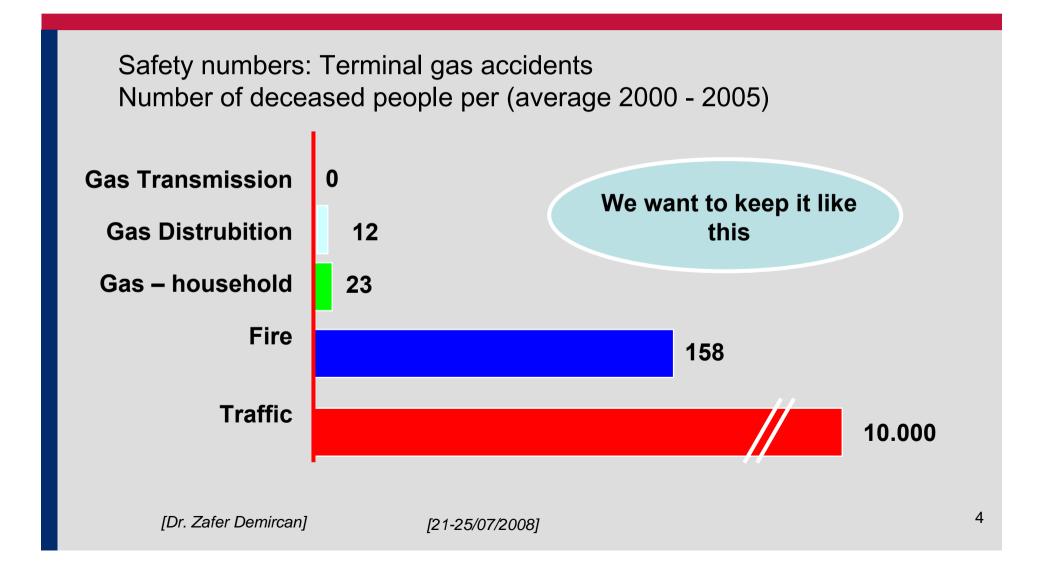
EMRA makes additional rules and conditions considering the Gas Act and supervises the implementation by TSO and DSO

With respect to design, construction, installation, control, commissioning and operation of internal installations, it shall be obligatory to conform to any one of TS, EN, ISO or IEC standards,

[Dr. Zafer Demircan] [21-25/07/2008]











TRIO-Supervision on multiple levels Design and Repair & **Operations Planning Maintenance** constructing replace Standarts and Operations \ Standarts and Planned and **Project** Int. Codes **Manual** Int. Codes **Unplanned Supervision** Record Record Record Record Record

5

All records should be kept at least 5 years,





CONSTRUCTION AND SERVICE ACTIVITIES

Planning

Design and constructing

Operations

Maintenance

Repair & replace

Article -5 Legal entities certificated from Authority

- ✓ Design-Construction
- ✓ Natural gas installation
- ✓ Service activities
- ✓Internal installment
- ✓ Mechanical and electrical hardware
- ✓ Consulting, supervision and audit

DSO-TSO and free consumers should contract with certified company.

[21-25/07/2008]





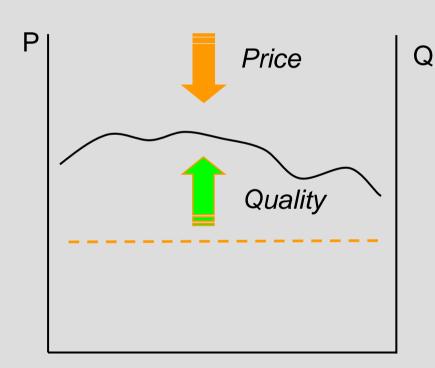
- ✓ Control of the design, construction and testing of the distribution network, commissioning and acceptance of the completed portions shall be performed by certificate holders.
- ✓ All these activities shall be registered in minutes.
- ✓ Certificates shall be issued for a minimum duration of ten, a maximum duration of thirty years.
- ✓ Approved natural gas internal installations engineer authorization certificate obtained from the Chamber of Mechanical Engineers, or Ministry of Education

[Dr. Zafer Demircan] [21-25/07/2008] 7





INCENTIVES ON QUALITY



Quality regulation is necessary for balance with price regulation

If DSO-TSO want to make more profit, they have to do better than the average.

Profitable investments in quality which are better than the average, pay themselves back





SERVICE QUALITY PERFORMANCE INDEX FOR TSO'S

I) SYSTEM ENTRY INFORMATION

- Number of total consumers
- •Accepted entry requests
- Rejected entry requests

II) TEMPORARY GAS OUTAGE CAUSES

- Consumer requests
- Nonpayment of the bills
- Court or board decisions
- Unauthorized and inappropriate use of gas

III) METERING

- Nonfunctional meters
- Inaccurate meters

IV-a) REASONS OF COMPLAINT

- Meters
- Gas pressure level
- Network capacity
- Network tariffs
- Gas outage
- Others





IV-b) COMPLAINT METHODS

- Written
- Over the phone
- By fax
- **E-mail**
- •Average time for resolving the complaints

IV-c) BILL OBJECTIONS

- Number of bill objections
- •Number of accepted bill objections
- Number of rejected bill objections

V) EMERGENCY INTERVENTIONS

- •Number of emergency notifications
- •Number of emergency telephone lines
- •Number of emergency intervention staff
- Emergency intervention vehicles
- Average time for emergency intervention

VI) OUTAGE

- Maintenance and repair
- •Outage time due to maintenance and rep.
- Emergency cases
- Outage time due to emergency cases

VII) LABOR SECURITY

- Accidents due to gas leakage
- •Injury and deaths caused by accidents
- •Missing time due to accidents





SERVICE QUALITY PERFORMANCE INDEX FOR DSO'S

I) SYSTEM ENTRY INFORMATION

- Number of total subscribers
- Number of total free consumers
- •Accepted entry requests
- Rejected entry requests
- Contract cancellation requests

II) TEMPORARY GAS OUTAGE CAUSES

- Consumer requests
- Nonpayment of the bills
- Court or board decisions
- Unauthorized and inappropriate use of gas





III) METERING

- Nonfunctional meters
- Inaccurate meters
- Number of consumers charged meter recommissioning fees
- Pre-paid meter card loading centers
- Twenty four hours available pre-paid meter card loading centers

IV-a) REASONS OF COMPLAINT

- Meters
- Gas pressure level
- Gas outage
- Complaints of certificate holders
- Others

IV-b) COMPLAINT METHODS
IV-c) BILL OBJECTIONS
V) EMERGENCY INTERVENTIONS
VI) OUTAGE
VII) LABOR SECURITY
VIII) CHANGE OF SUPPLIER